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| | | |
|---|---|---|
| NEWS 1 | | Web Page for STN Seminar Schedule - N. America |
| NEWS 2 | MAY 01 | New CAS web site launched |
| NEWS 3 | MAY 08 | CA/CAplus Indian patent publication number format defined |
| NEWS 4 | MAY 14 | RDISCLOSURE on STN Easy enhanced with new search and display fields |
| NEWS 5 | MAY 21 | BIOSIS reloaded and enhanced with archival data |
| NEWS 6 | MAY 21 | TOXCENTER enhanced with BIOSIS reload |
| NEWS 7 | MAY 21 | CA/CAplus enhanced with additional kind codes for German patents |
| NEWS 8 | MAY 22 | CA/CAplus enhanced with IPC reclassification in Japanese patents |
| NEWS 9 | JUN 27 | CA/CAplus enhanced with pre-1967 CAS Registry Numbers |
| NEWS 10 | JUN 29 | STN Viewer now available |
| NEWS 11 | JUN 29 | STN Express, Version 8.2, now available |
| NEWS 12 | JUL 02 | LEMBASE coverage updated |
| NEWS 13 | JUL 02 | LMEDLINE coverage updated |
| NEWS 14 | JUL 02 | SCISEARCH enhanced with complete author names |
| NEWS 15 | JUL 02 | CHEMCATS accession numbers revised |
| NEWS 16 | JUL 02 | CA/CAplus enhanced with utility model patents from China |
| NEWS 17 | JUL 16 | CAplus enhanced with French and German abstracts |
| NEWS 18 | JUL 18 | CA/CAplus patent coverage enhanced |
| NEWS 19 | JUL 26 | USPATFULL/USPAT2 enhanced with IPC reclassification |
| NEWS 20 | JUL 30 | USGENE now available on STN |
| NEWS 21 | AUG 06 | CAS REGISTRY enhanced with new experimental property tags |
| NEWS 22 | AUG 06 | BEILSTEIN updated with new compounds |
| NEWS 23 | AUG 06 | FSTA enhanced with new thesaurus edition |
| NEWS 24 | AUG 13 | CA/CAplus enhanced with additional kind codes for granted patents |
| NEWS 25 | AUG 20 | CA/CAplus enhanced with CAS indexing in pre-1907 records |
| NEWS 26 | AUG 27 | Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB |
| NEWS 27 | AUG 27 | USPATOLD now available on STN |
| NEWS 28 | AUG 28 | CAS REGISTRY enhanced with additional experimental spectral property data |
| NEWS 29 | SEP 07 | STN AnaVist, Version 2.0, now available with Derwent World Patents Index |

NEWS EXPRESS 05 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 05 SEPTEMBER 2007.

| | |
|---|---|
| NEWS HOURS | STN Operating Hours Plus Help Desk Availability |
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| NEWS IPC8 | For general information regarding STN implementation of IPC 8 |

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FILE 'HOME' ENTERED AT 08:37:52 ON 11 SEP 2007

=> file reg

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
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DICTIONARY FILE UPDATES: 10 SEP 2007 HIGHEST RN 946567-47-1

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http://www.cas.org/support/stngen/stndoc/properties.html

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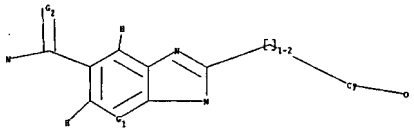
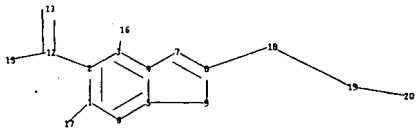
Uploading C:\Program Files\Stnexp\Queries\10530499a.str





chain nodes :
12 13 15 16 17 18 19 20
ring nodes :
1 2 3 4 5 6 7 8 9
chain bonds :
1-17 2-12 3-16 8-18 12-13 12-15 18-19 19-20
ring bonds :
1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-9 7-8 8-9
exact/norm bonds :
1-2 1-6 1-17 2-3 2-12 3-4 3-16 4-5 4-7 5-6 5-9 7-8 8-9 8-18 12-13
12-15 18-19 19-20
isolated ring systems :
containing 1 :

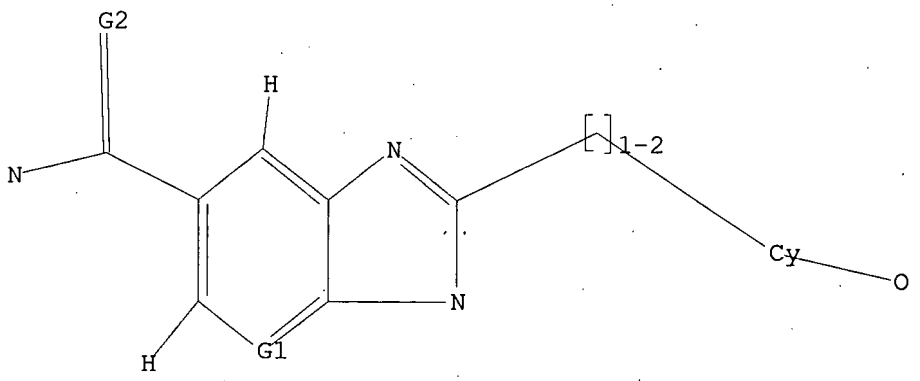
G1:C,N

G2:O,S

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 12:CLASS
13:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:Atom 20:CLASS

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR




G1 C,N

G2 O,S

Structure attributes must be viewed using STN Express query preparation.

=> s l1
SAMPLE SEARCH INITIATED 08:38:23 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 891 TO ITERATE

100.0% PROCESSED 891 ITERATIONS 8 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 16030 TO 19610
PROJECTED ANSWERS: 8 TO 329

L2 8 SEA SSS SAM L1

=> s scan
L3 47 SCAN

=> s l2 full
FULL SEARCH INITIATED 08:38:42 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 17555 TO ITERATE

100.0% PROCESSED 17555 ITERATIONS 157 ANSWERS
SEARCH TIME: 00.00.01

L4 157 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS

| | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 177.05 | 177.26 |

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FILE LAST UPDATED: 10 Sep 2007 (20070910/ED)

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L5 9 L4

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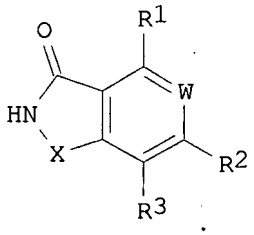
L5 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:1123456 CAPLUS
DOCUMENT NUMBER: 145:454932
TITLE: Preparation of nitrogen-containing heterocyclic compounds as antitumor agents
INVENTOR(S): Murakata, Chikara; Amishiro, Nobuyoshi; Atsumi, Toshiyuki; Yamashita, Yoshinori; Takahashi, Takeshi; Nakai, Ryuichiro; Tagaya, Hisashi; Takahashi, Hiroko; Funahashi, Jun; Yamamoto, Junichiro; Fukuda, Yuichi
PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan
SOURCE: PCT Int. Appl., 531pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2006112479 | A1 | 20061026 | WO 2006-JP308224 | 20060419 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: JP 2005-120953 A 20050419
OTHER SOURCE(S): MARPAT 145:454932
GI



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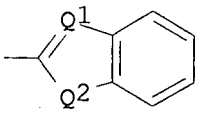
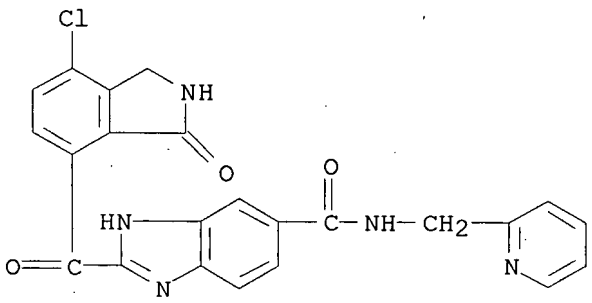
Q= 

AB Nitrogen-containing heterocyclic compds. such as 7-(indol-2-yl)isoindolinone and 4-(indol-2-yl)-1,2-dihydro-1H-pyrrolo[3,4-c]pyridin-3-one derivs. [I; W = N, CH; X = CO, (un)substituted CH; R1 = Q; q1 = N, (un)substituted CH; Q2 = O, S, (un)substituted NH; R2, R3 R5, R6 = H, halo, NO2, HO, cyano, CO2H, each (un)substituted lower alkyl, cycloalkyl, aralkyl, lower alkenyl, lower alkynyl, aryl, heterocyclyl, lower alkanoyl, lower alkoxycarbonyl, aroyl, heteroaroyl, or HO, S(O)mR18; m = an integer of 0-2; R18 = H, HO, each (un)substituted lower alkoxy, lower alkyl, cycloalkyl, aralkyl, lower alkenyl, aryl, heterocyclyl, or NH2] or pharmacol. acceptable salts thereof are prepared These compds. are useful as protein kinase inhibitors, in particular fibroblast growth factor receptor (FGFR) inhibitors, Aurora kinase inhibitors, and FMS-like tyrosine kinase-3 (FLT-3) inhibitors, and thereby as antitumor agents for treatment of hematopoietic tumors, in particular leukemia, multiple myeloma, and lymphoma. Thus, reductive alkylation of 1-(2-hydroxyethyl)piperazine with 4-chloro-7-[1-(tert-butoxycarbonyl)-5-formylindol-2-yl]isoindolinone using sodium triacetoxyborohydride in a mixture of AcOH and MeCN followed by treatment with HCl/EtOAc gave 4-chloro-7-(1H-5-[4-(2-hydroxyethyl)piperazin-1-ylmethyl]indol-2-yl)isoindolinone dihydrochloride (II). II at 10 μM inhibited ≥50% human FGFR3 expressed in insect cells, human multiple myeloma KMS-11 cells, and human stomach cancer cells KATO-III.

IT 913385-43-0P, 4-Chloro-7-[[1H-5-[[[(pyridin-2-yl)methyl]amino]carbonyl]benzimidazol-2-yl]carbonyl]isoindolinone
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of nitrogen-containing heterocyclic compds. as protein kinase inhibitors and antitumor agents)

RN 913385-43-0 CAPLUS

CN 1H-Benzimidazole-5-carboxamide, 2-[(7-chloro-2,3-dihydro-3-oxo-1H-isoindol-4-yl)carbonyl]-N-(2-pyridinylmethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

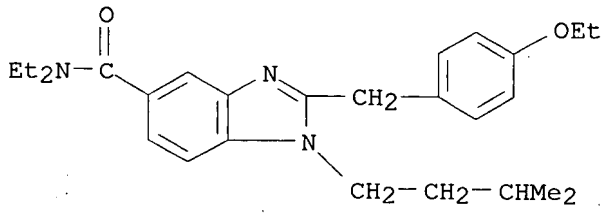
L5 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:665189 CAPLUS

DOCUMENT NUMBER: 145:327641
TITLE: Novel benzimidazole derivatives as selective CB2 inverse agonists
AUTHOR(S): Page, D.; Brochu, M.-C.; Yang, H.; Brown, W.; St-Onge, S.; Martin, E.; Salois, D.
CORPORATE SOURCE: Department of Chemistry, AstraZeneca R and D Montreal, Ville St-Laurent, QC, H4S 1Z9, Can.
SOURCE: Letters in Drug Design & Discovery (2006), 3(5), 298-303
CODEN: LDDDAW; ISSN: 1570-1808
PUBLISHER: Bentham Science Publishers Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The preparation and evaluation of a novel class of CB2 benzimidazole inverse agonists are reported. They showed binding affinities up to 0.7 nM towards CB2 with overall good selectivity over the CB1 receptor. They also reversed the effect of the cannabinoid agonist WIN55212-2 in competition assays showing Ki' values up to 1.2 nM.

IT 474015-61-7
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(novel benzimidazole derivs. as selective CB2 inverse agonists)

RN 474015-61-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-(3-methylbutyl)- (9CI) (CA INDEX NAME)



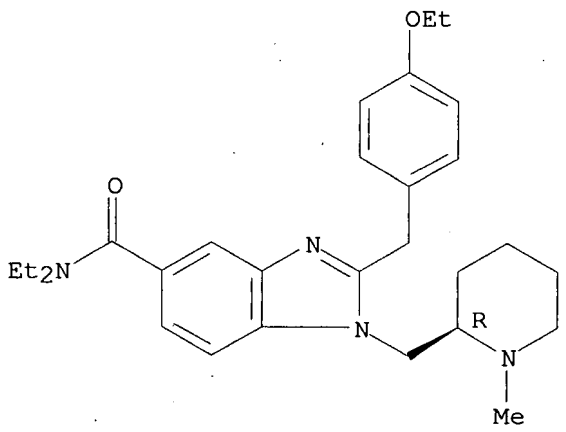

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1117980 CAPLUS
DOCUMENT NUMBER: 144:16432
TITLE: Virtual Screening of Novel CB2 Ligands Using a Comparative Model of the Human Cannabinoid CB2 Receptor
AUTHOR(S): Salo, Outi M. H.; Raitio, Katri H.; Savinainen, Juha R.; Nevalainen, Tapio; Lahtela-Kakkonen, Maija; Laitinen, Jarmo T.; Jaervinen, Tomi; Poso, Antti
CORPORATE SOURCE: Department of Pharmaceutical Chemistry, University of Kuopio, Kuopio, FIN-70211, Finland
SOURCE: Journal of Medicinal Chemistry (2005), 48(23), 7166-7171
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB To identify novel selective CB2 lead compds., a comparative model of the CB2 receptor was constructed using the high-resolution bovine rhodopsin X-ray structure as a template. The CB2 model was utilized both in building the database queries and in filtering the hit compds. by a docking and scoring method. In G-protein activation assays, 1-isoquinolyl[3-(trifluoromethyl)phenyl]methanone (40, NRB 04079) was found to act as a selective agonist at the human CB2 receptor.

IT 474016-55-2
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(virtual screening of novel CB2 ligands using CB2 receptor model)
RN 474016-55-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-[[(2R)-1-methyl-2-piperidinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




REFERENCE COUNT: 112 THERE ARE 112 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:369276 CAPLUS
DOCUMENT NUMBER: 142:411658
TITLE: Preparation of 2-(aminoalkyl)-5-benzimidazolecarboxamide derivatives as peptide deformylase inhibitors
INVENTOR(S): Hjelmencrantz, Anders; Cali, Patrizia; Groth, Thomas; Jensen, Christian Eeg; Naerum, Lars
PATENT ASSIGNEE(S): Arpida A/S, Den.
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2005037272 | A1 | 20050428 | WO 2004-DK679 | 20041008 |
| WO 2005037272 | A8 | 20050623 | | |
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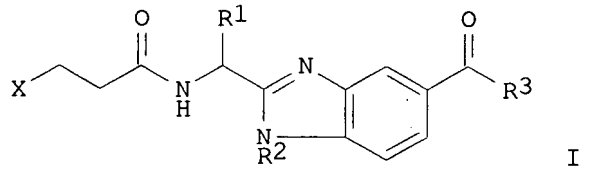
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1677785 | A1 | 20060712 | EP 2004-762898 | 20041008 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

| | | | | | |
|---|---|---|---|---|---|
| JP 2007509082 | T | 20070412 | JP 2006-535947 | | 20041008 |
| US 2007066672 | A1 | 20070322 | US 2006-572415 | | 20060317 |
| PRIORITY APPLN. INFO.: | | | DK 2003-1553 | A | 20031022 |
| | | | US 2003-513891P | P | 20031023 |
| | | | WO 2004-DK679 | W | 20041008 |

OTHER SOURCE(S): CASREACT 142:411658; MARPAT 142:411658

GI



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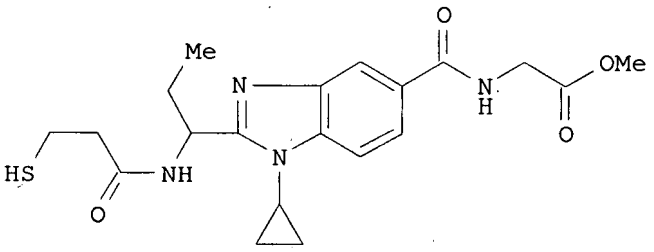


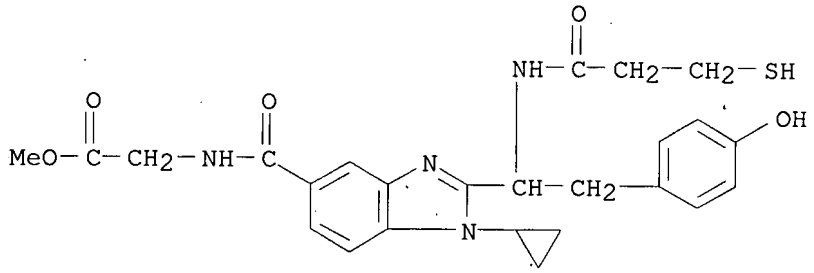
II

AB The invention relates to benzimidazole compds. I [X is CONHOH, CO2H, OH or SH; R1 is alkyl, cycloalkyl, mercapto-, alkylthio-, hydroxy- or carboxyalkyl, etc., (un)substituted aryl or heteroaryl, or a side chain of a natural α-amino acid, with the proviso that R1 cannot be H or tert-butyl; R2 is alkyl, alkenyl, cycloalkyl, cycloalkylalkyl, heterocycloalkyl, alkoxy, mercaptoalkyl, hydroxyalkyl, alkylthio, etc., (un)substituted aryl or heteroaryl; R3 is NHCHR4COR5, NR6R7, NHR7 or OR7, where R4 is H or a side chain of a natural α-amino acid, R5 is amino, hydroxy, alkoxy or alkylamino, and R6, R7 are independently heterocycloalkyl, aryl or heteroaryl] and their pharmaceutically-acceptable salts or esters which are peptide deformylase inhibitors useful in the treatment or prevention of infections and other diseases in which peptide deformylases are involved, especially in the treatment of bacterial and parasitic infections. Thus, peptidyl compound II was prepared by the solid-phase method and showed IC50 values 65.0 and 45.4 microM for inhibition of the enzyme from E. coli and S. aureus, resp.

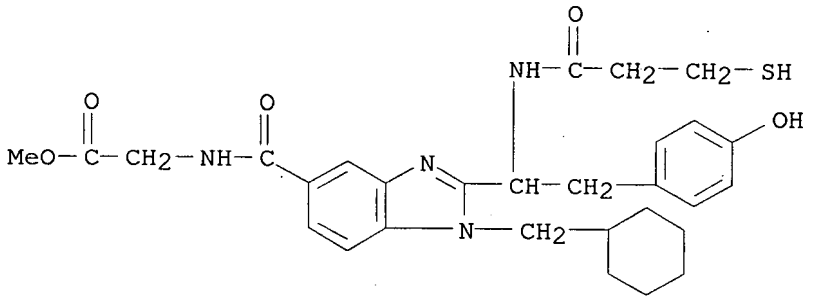
IT 850487-92-2P 850487-94-4P 850488-02-7P
850488-04-9P 850488-66-3P 850488-68-5P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of (aminoalkyl)benzimidazolecarboxamide derivs. as peptide deformylase inhibitors)

RN 850487-92-2 CAPLUS

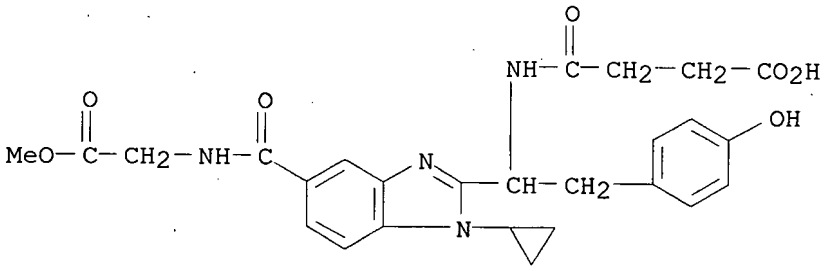
CN Glycine, N-[[1-cyclopropyl-2-[2-(4-hydroxyphenyl)-1-[(3-mercapto-1-oxopropyl)amino]ethyl]-1H-benzimidazol-5-yl]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)



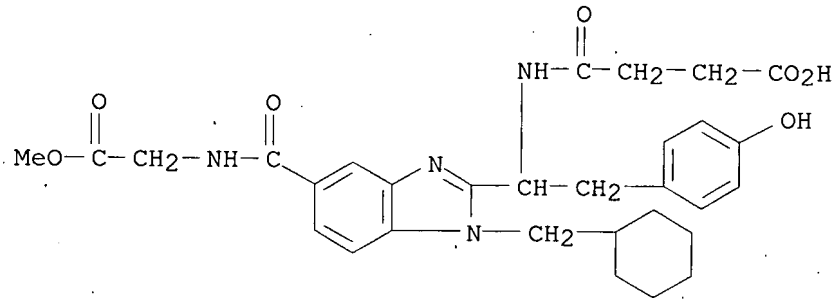
RN 850487-94-4 CAPLUS
CN Glycine, N-[[1-(cyclohexylmethyl)-2-[2-(4-hydroxyphenyl)-1-[(3-mercapto-1-oxopropyl)amino]ethyl]-1H-benzimidazol-5-yl]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)



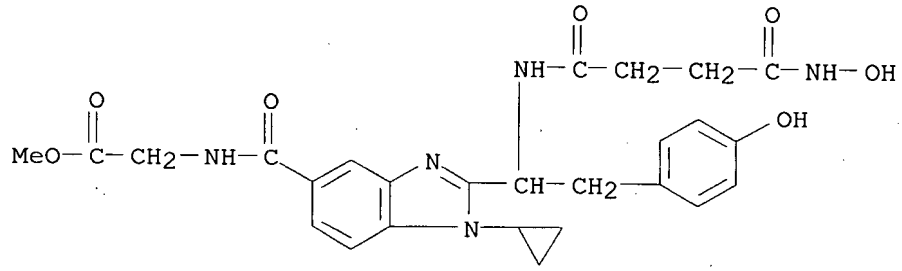
RN 850488-02-7 CAPLUS
CN Butanoic acid, 4-[[1-[1-cyclopropyl-5-[[(2-methoxy-2-oxoethyl)amino]carbonyl]-1H-benzimidazol-2-yl]-2-(4-hydroxyphenyl)ethyl]amino]-4-oxo- (9CI) (CA INDEX NAME)



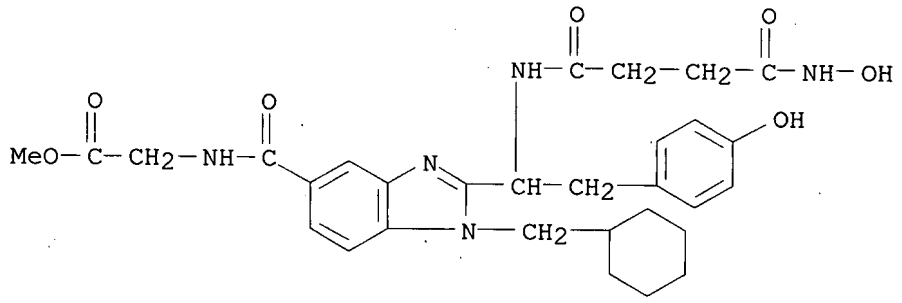
RN 850488-04-9 CAPLUS
CN Butanoic acid, 4-[[1-[1-(cyclohexylmethyl)-5-[[(2-methoxy-2-oxoethyl)amino]carbonyl]-1H-benzimidazol-2-yl]-2-(4-hydroxyphenyl)ethyl]amino]-4-oxo- (9CI) (CA INDEX NAME)



RN 850488-66-3 CAPLUS
CN Glycine, N-[[1-cyclopropyl-2-[1-[[4-(hydroxyamino)-1,4-dioxobutyl]amino]-2-(4-hydroxyphenyl)ethyl]-1H-benzimidazol-5-yl]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 850488-68-5 CAPLUS
CN Glycine, N-[[1-(cyclohexylmethyl)-2-[1-[[4-(hydroxyamino)-1,4-dioxobutyl]amino]-2-(4-hydroxyphenyl)ethyl]-1H-benzimidazol-5-yl]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)



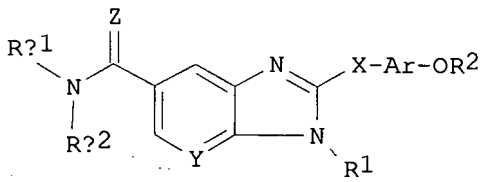
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:354919 CAPLUS
DOCUMENT NUMBER: 140:375170
TITLE: Preparation of benzimidazolecarboxamides as CB2 receptor agonists for treating pain and other disorders
INVENTOR(S): Page, Daniel; Walpole, Christopher; Yang, Hua
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.
SOURCE: PCT Int. Appl., 87 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2004035548 | A1 | 20040429 | WO 2003-SE1604 | 20031015 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2501418 | A1 | 20040429 | CA 2003-2501418 | 20031015 |
| AU 2003269775 | A1 | 20040504 | AU 2003-269775 | 20031015 |
| EP 1554254 | A1 | 20050720 | EP 2003-751705 | 20031015 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| BR 2003015320 | A | 20050816 | BR 2003-15320 | 20031015 |
| CN 1726194 | A | 20060125 | CN 2003-80105921 | 20031015 |
| JP 2006505568 | T | 20060216 | JP 2004-545139 | 20031015 |
| US 2007105893 | A1 | 20070510 | US 2005-530499 | 20050406 |
| ZA 2005002928 | A | 20060222 | ZA 2005-2928 | 20050411 |
| MX 2005PA03901 | A | 20050622 | MX 2005-PA3901 | 20050412 |
| NO 2005002182 | A | 20050503 | NO 2005-2182 | 20050503 |
| PRIORITY APPLN. INFO.: | | | SE 2002-3070 A | 20021016 |
| | | | WO 2003-SE1604 W | 20031015 |

OTHER SOURCE(S): MARPAT 140:375170
GI

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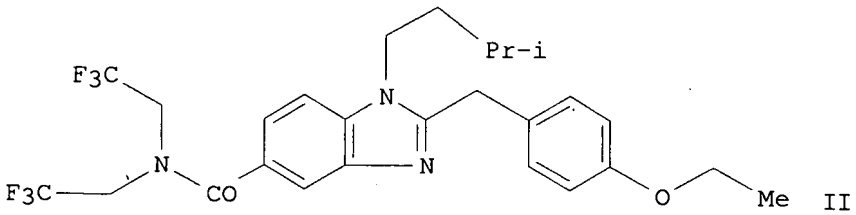



II

AB Benzimidazolecarboxamides (shown as I; variables defined below; e.g. II) as well as salts and pharmaceutical compns. including the compds. were prepared These compds. are useful in therapy, in particular in the management of pain. For I: RF1 and RF2 = electron-withdrawing groups; Z = O and S; R1 = (un)substituted C1-10-alkyl, (un)substituted C2-10alkenyl, (un)substituted C2-10alkynyl, R3R4N-C1-6alkyl, R3R4NC(O)-C1-6alkyl, R3O-C1-6-alkyl, R3OC(O)-C1-6alkyl, R3C(O)-C1-6alkyl, R3C(O)NR3-C1-6alkyl, R3R4NSO2-C1-6alkyl, R3CSO2N(R4)-C1-6alkyl, R3R4NC(O)N(R5)-C1-6alkyl, R3R4NSO2N(R5)-C1-6alkyl, aryl-C1-6alkyl, aryl-C(O)-C1-6alkyl, heterocyclyl-C1-6alkyl, heterocyclyl-C(O)-C1-6alkyl, substituted aryl-C1-6alkyl, substituted aryl-C(O)-C1-6alkyl, substituted

heterocyclyl-C1-6alkyl, substituted heterocyclyl-C(O)-C1-6alkyl, and C1-10hydrocarbylamino. R2 = (un)substituted C1-6alkyl, (un)substituted C2-6alkenyl, (un)substituted C2-6alkynyl, (un)substituted C3-6cycloalkyl, (un)substituted aryl, and (un)substituted C5-6heteroaryl; R3, R4 and R5 = H, C1-6alkyl, C2-6alkenyl, C2-6alkynyl, and a divalent C1-6group that together with another divalent C1-6group forms a portion of a ring; X is a C1-10 divalent group that separates groups connected thereto by one or two atoms; Ar is a C4-12 divalent aromatic group; and Y = CH and N; addnl. details are given in the claims. Methods of preparation are claimed and example prepns. for .apprx.30 I and 39 intermediates are included. For example, II was prepared in 71% yield from 4-ethoxyphenylacetyl chloride and 3-amino-4-[(3-methylbutyl)amino]-N,N-bis(2,2,2-trifluoroethyl)benzamide, which was prepared in 99% yield by reduction of 4-[(3-methylbutyl)amino]-3-nitro-N,N-bis(2,2,2-trifluoroethyl)benzamide, which was prepared in 99% yield from isoamylamine and 4-fluoro-3-nitro-N,N-bis(2,2,2-trifluoroethyl)benzamide, which was prepared in 66% yield from 4-fluoro-3-nitrobenzoic acid and bis(2,2,2-trifluoroethyl)amine. Dissociation consts. (Ki) for binding to CB1 and CB2 are tabulated for 36 examples of I; they show much stronger binding to CB2 than to CB1.

IT 683233-67-2P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(drug candidate; preparation of benzimidazolecarboxamides as CB2 receptor agonists for treating pain and other disorders)

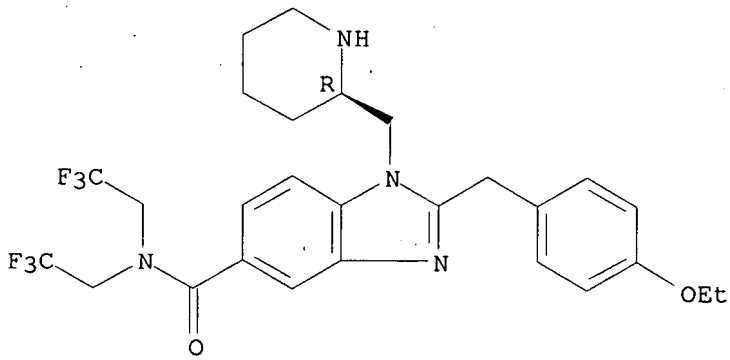
RN 683233-67-2 CAPLUS

CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(2R)-2-piperidinylmethyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (10:21) (9CI) (CA INDEX NAME)

CM 1

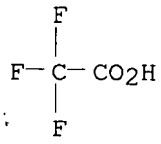
CRN 683233-66-1
CMF C27 H30 F6 N4 O2

Absolute stereochemistry.




CM 2

CRN 76-05-1
CMF C2 H F3 O2



IT 683233-41-2P 683233-42-3P 683233-43-4P
683233-44-5P 683233-45-6P 683233-46-7P
683233-47-8P 683233-48-9P 683233-49-0P
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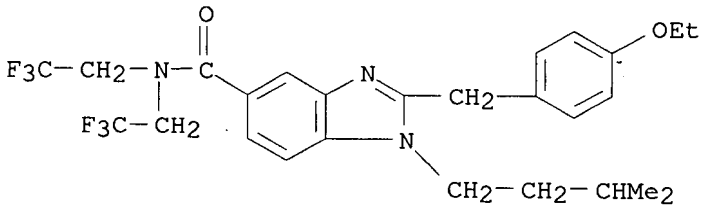
683234-06-2P 683234-07-3P 683234-08-4P
683234-10-8P 683234-12-0P 683234-13-1P
683234-14-2P 683234-15-3P 683234-16-4P
683234-17-5P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of benzimidazolecarboxamides as CB2 receptor agonists for treating pain and other disorders)

RN 683233-41-2 CAPLUS

CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-(3-methylbutyl)-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

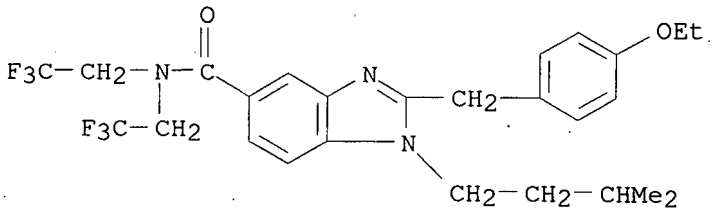


RN 683233-42-3 CAPLUS

CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-(3-methylbutyl)-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (10:3) (9CI) (CA INDEX NAME)

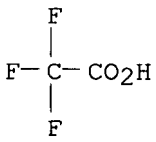
CM 1

CRN 683233-41-2
CMF C26 H29 F6 N3 O2

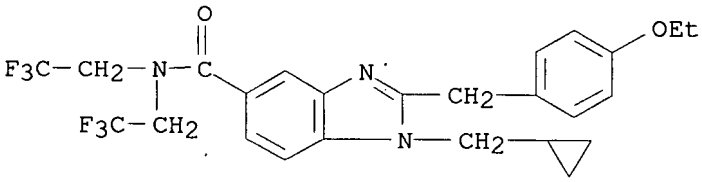


CM 2

CRN 76-05-1
CMF C2 H F3 O2



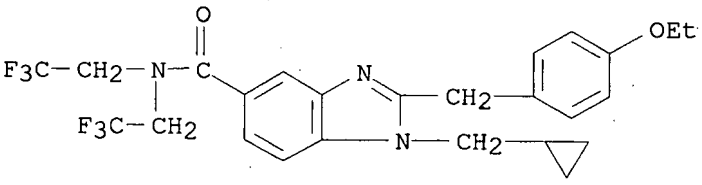
RN 683233-43-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopropylmethyl)-2-[(4-ethoxyphenyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-44-5 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopropylmethyl)-2-[(4-ethoxyphenyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

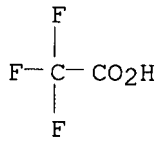
CM 1

CRN 683233-43-4
CMF C25 H25 F6 N3 O2

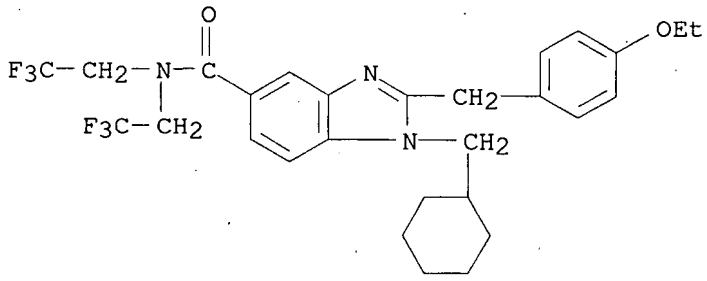


CM 2

CRN 76-05-1
CMF C2 H F3 O2



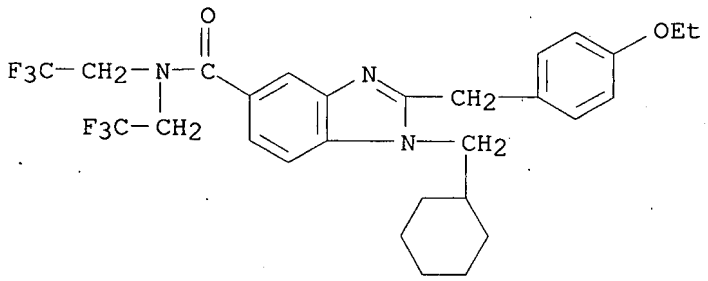
RN 683233-45-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclohexylmethyl)-2-[(4-ethoxyphenyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-46-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclohexylmethyl)-2-[(4-ethoxyphenyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (10:9) (9CI) (CA INDEX NAME)

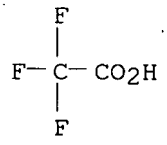
CM 1

CRN 683233-45-6
CMF C28 H31 F6 N3 O2



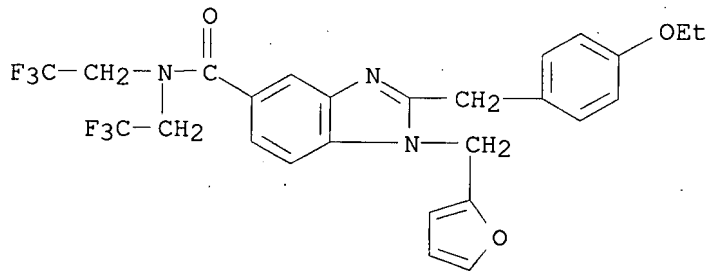
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 683233-47-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-(2-

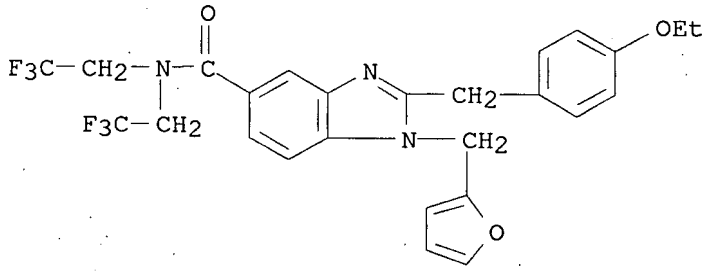
furanylmethyl)-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-48-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-(2-furanylmethyl)-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:2) (9CI) (CA INDEX NAME)

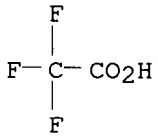
CM 1

CRN 683233-47-8
CMF C26 H23 F6 N3 O3



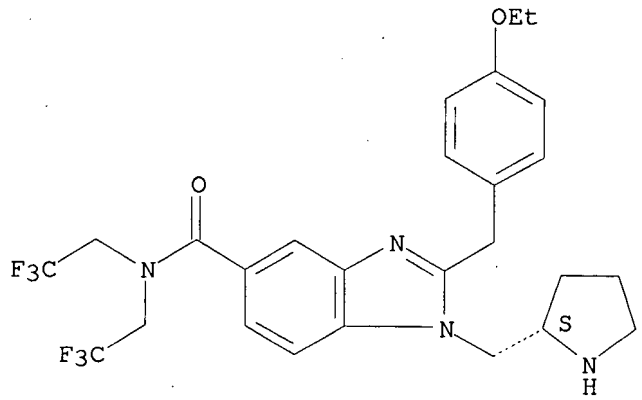
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 683233-49-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(2S)-2-pyrrolidinylmethyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

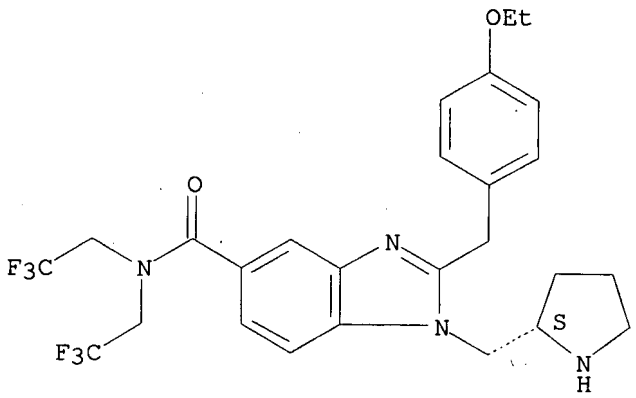



RN 683233-50-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(2S)-2-pyrrolidinylmethyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:11) (9CI) (CA INDEX NAME)

CM 1

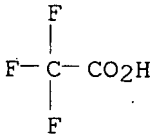
CRN 683233-49-0
CMF C26 H28 F6 N4 O2

Absolute stereochemistry.



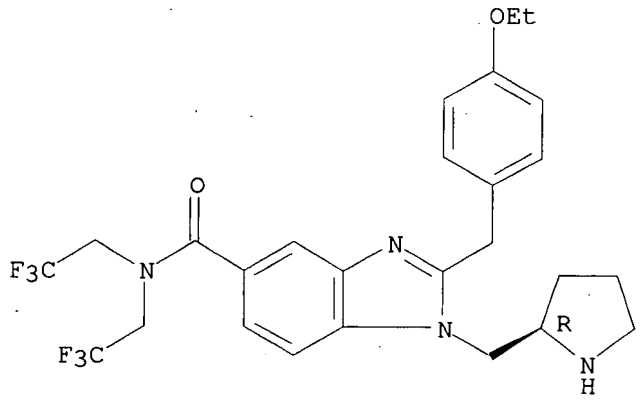

CM 2

CRN 76-05-1
CMF C2 H F3 O2




RN 683233-51-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(2R)-2-pyrrolidinylmethyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

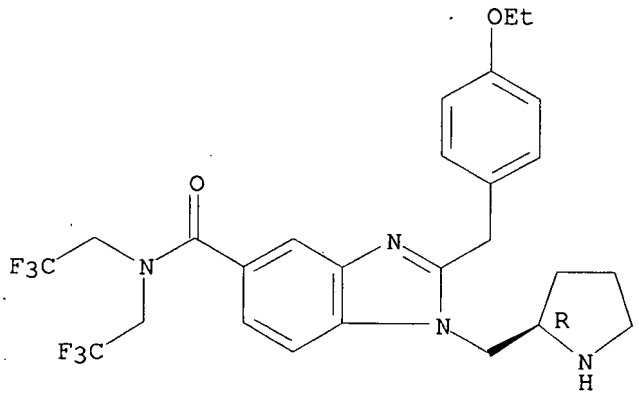



RN 683233-52-5 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(2R)-2-pyrrolidinylmethyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:11) (9CI) (CA INDEX NAME)

CM 1

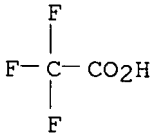
CRN 683233-51-4
CMF C26 H28 F6 N4 O2

Absolute stereochemistry.

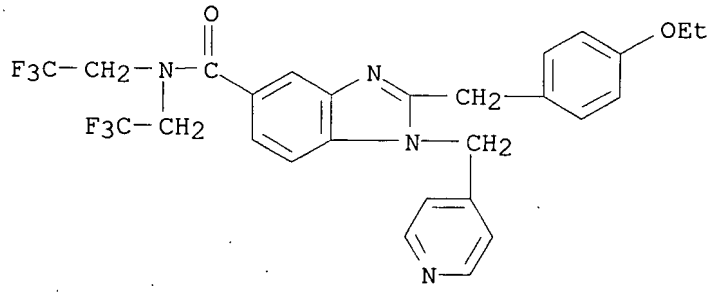



CM 2

CRN 76-05-1
CMF C2 H F3 O2



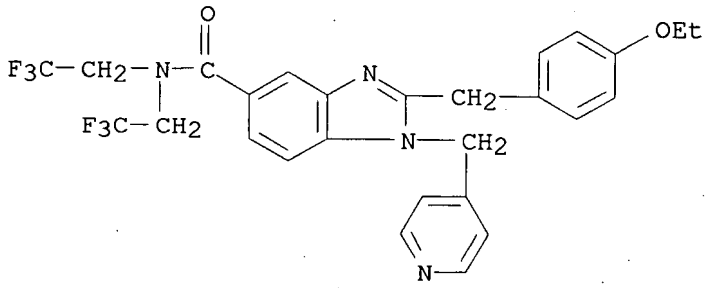

RN 683233-53-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-(4-pyridinylmethyl)-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-54-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-(4-pyridinylmethyl)-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (2:5) (9CI) (CA INDEX NAME)

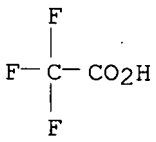
CM 1

CRN 683233-53-6
CMF C27 H24 F6 N4 O2

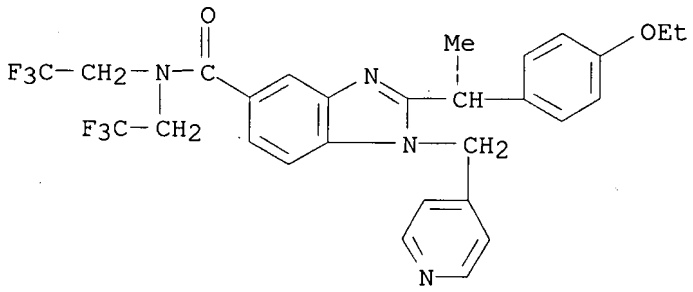


CM 2

CRN 76-05-1
CMF C2 H F3 O2



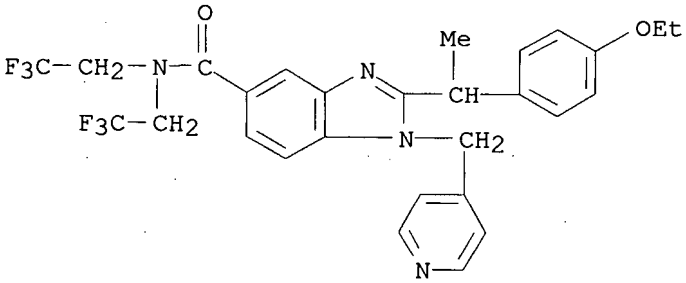
RN 683233-55-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[1-(4-ethoxyphenyl)ethyl]-1-(4-pyridinylmethyl)-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-56-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[1-(4-ethoxyphenyl)ethyl]-1-(4-pyridinylmethyl)-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:8) (9CI) (CA INDEX NAME)

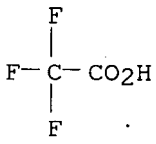
CM 1

CRN 683233-55-8
CMF C28 H26 F6 N4 O2

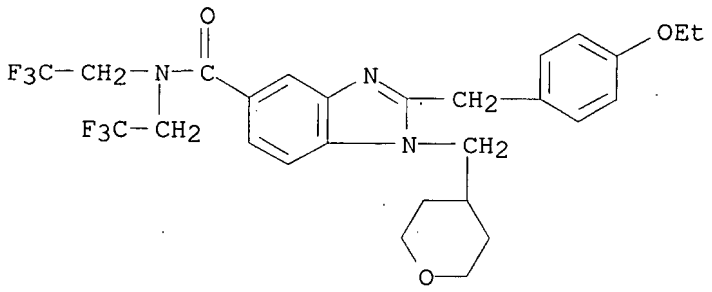


CM 2

CRN 76-05-1
CMF C2 H F3 O2



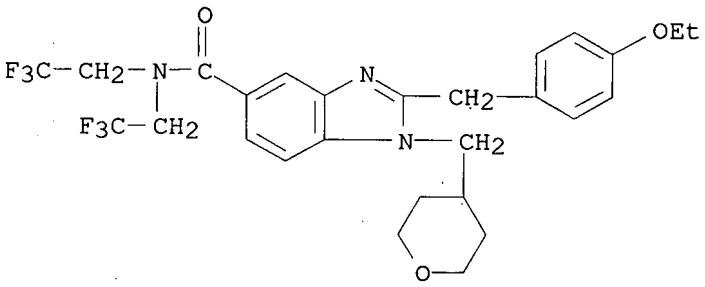
RN 683233-58-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(tetrahydro-2H-pyran-4-yl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-59-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(tetrahydro-2H-pyran-4-yl)methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:6) (9CI) (CA INDEX NAME)

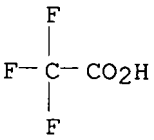
CM 1

CRN 683233-58-1
CMF C27 H29 F6 N3 O3



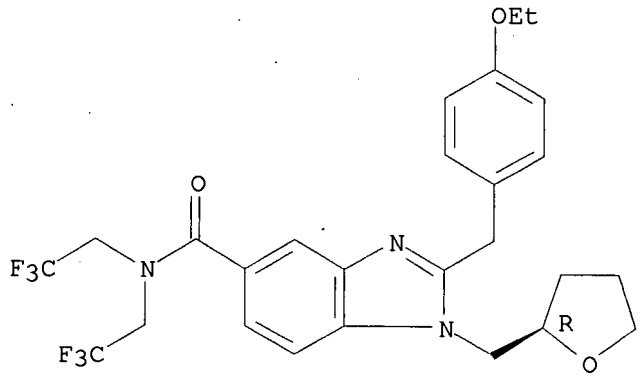
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 683233-60-5 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[[(2R)-tetrahydro-2-furanyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

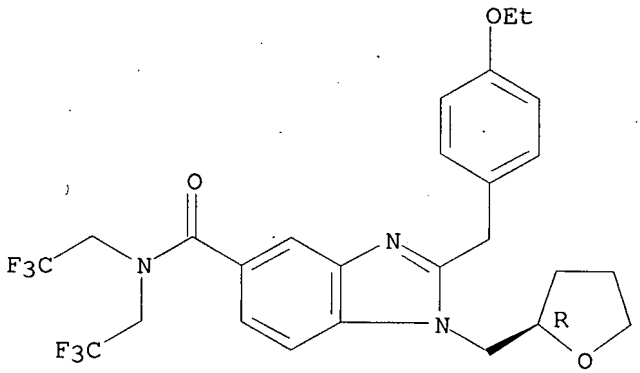



RN 683233-61-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[[(2R)-tetrahydro-2-furanyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:7) (9CI) (CA INDEX NAME)

CM 1

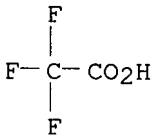
CRN 683233-60-5
CMF C26 H27 F6 N3 O3

Absolute stereochemistry.



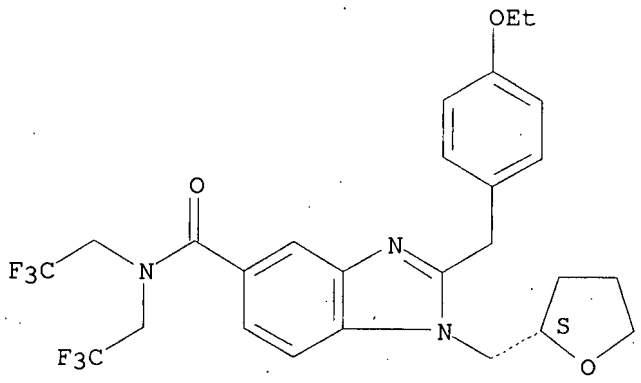

CM 2

CRN 76-05-1
CMF C2 H F3 O2




RN 683233-62-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[[(2S)-tetrahydro-2-furanyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

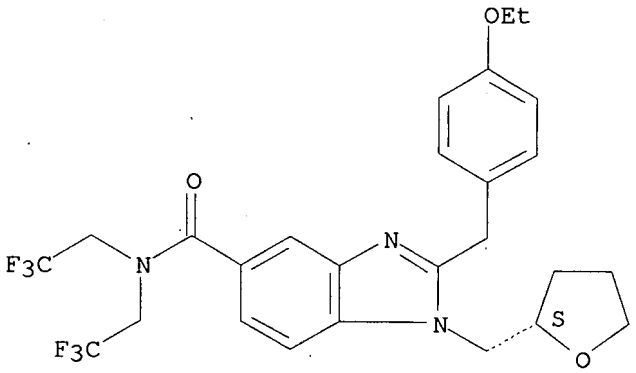



RN 683233-63-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[[(2S)-tetrahydro-2-furanyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:7) (9CI) (CA INDEX NAME)

CM 1

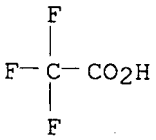
CRN 683233-62-7
CMF C26 H27 F6 N3 O3

Absolute stereochemistry.

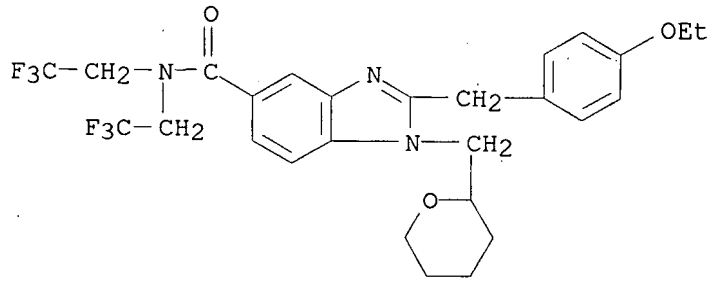



CM 2

CRN 76-05-1
CMF C2 H F3 O2



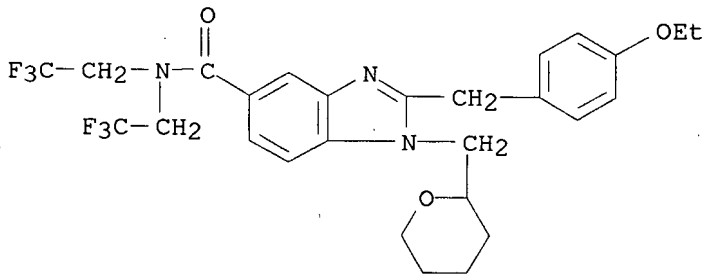

RN 683233-64-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(tetrahydro-2H-pyran-2-yl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-65-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(tetrahydro-2H-pyran-2-yl)methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:8) (9CI) (CA INDEX NAME)

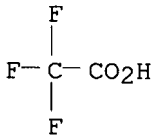
CM 1

CRN 683233-64-9
CMF C27 H29 F6 N3 O3



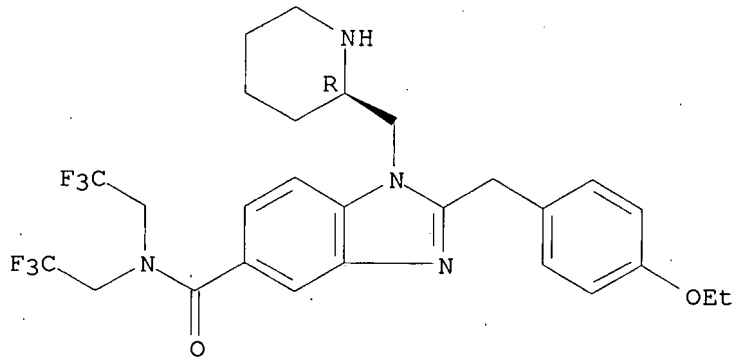
CM 2

CRN 76-05-1
CMF C2 H F3 O2

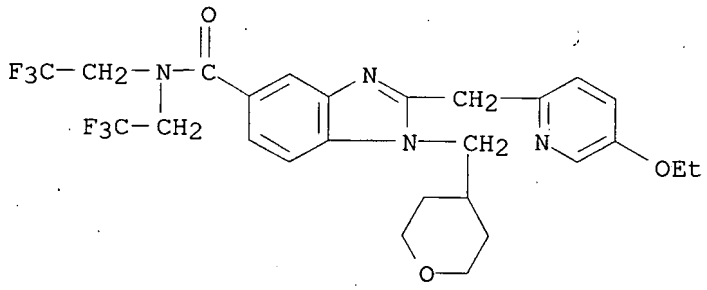


RN 683233-66-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(2R)-2-piperidinylmethyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



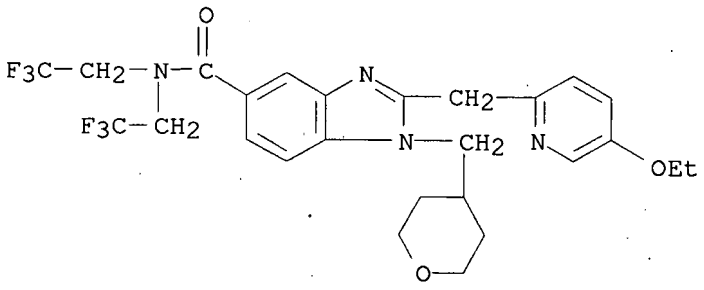
RN 683233-68-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-[(tetrahydro-2H-pyran-4-yl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-69-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-[(tetrahydro-2H-pyran-4-yl)methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:8) (9CI) (CA INDEX NAME)

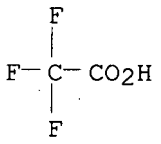
CM 1

CRN 683233-68-3
CMF C26 H28 F6 N4 O3

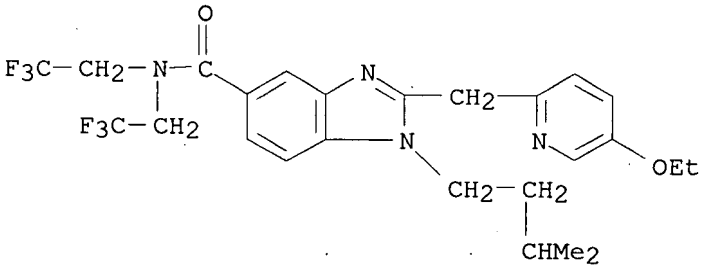


CM 2

CRN 76-05-1
CMF C2 H F3 O2



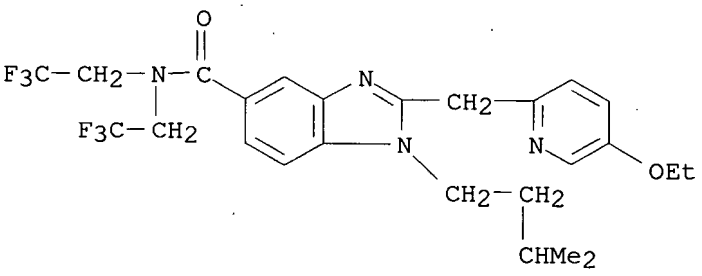
RN 683233-71-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-(3-methylbutyl)-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-72-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-(3-methylbutyl)-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:4) (9CI) (CA INDEX NAME)

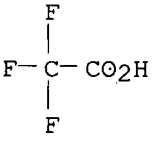
CM 1

CRN 683233-71-8
CMF C25 H28 F6 N4 O2



CM 2

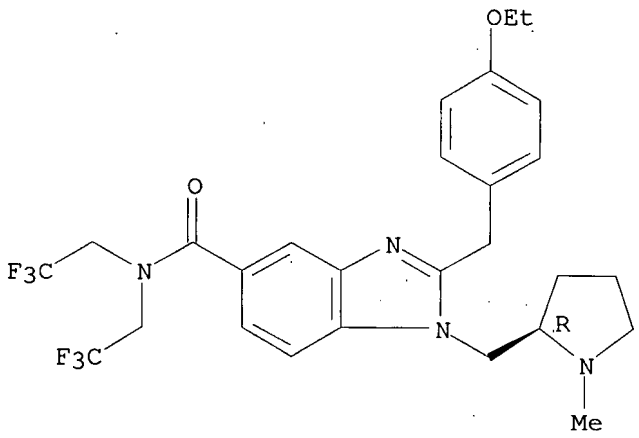
CRN 76-05-1
CMF C2 H F3 O2



RN 683233-73-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[[(2R)-1-methyl-2-pyrrolidinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA

INDEX NAME)

Absolute stereochemistry.

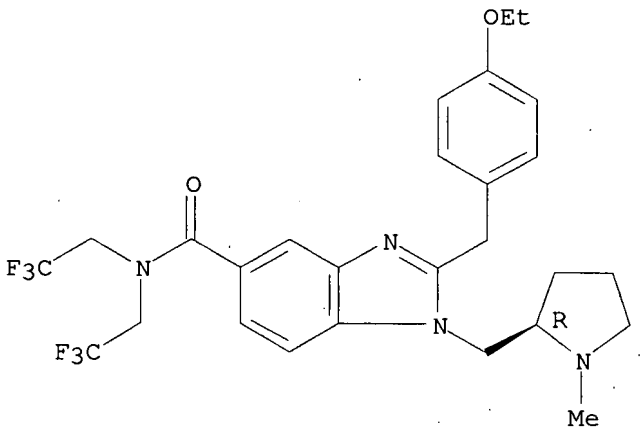



RN 683233-74-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[[(2R)-1-methyl-2-pyrrolidinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)-, tris(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

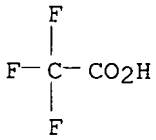
CRN 683233-73-0
CMF C27 H30 F6 N4 O2

Absolute stereochemistry.



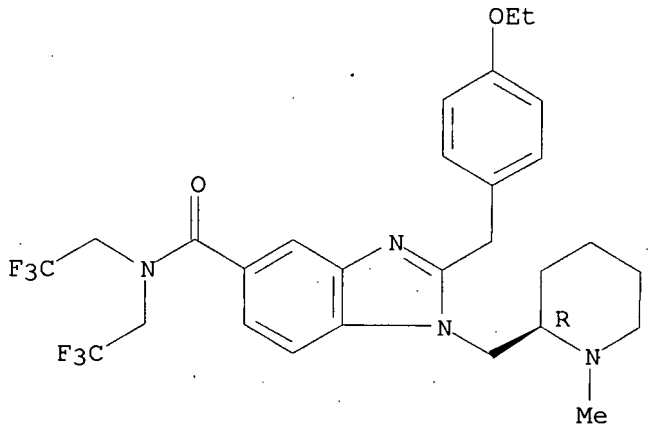

CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 683233-75-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[[(2R)-1-methyl-2-piperidinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

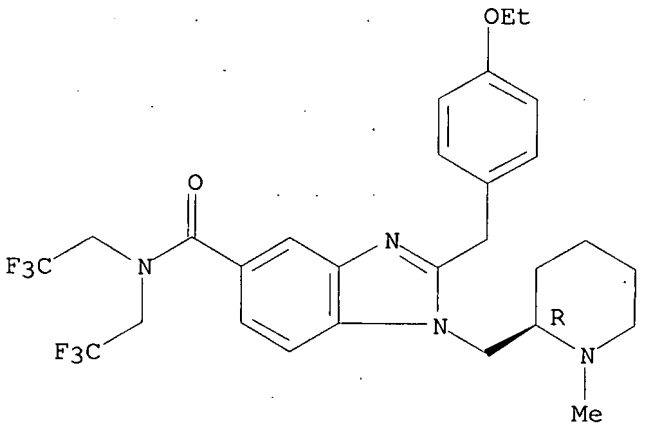



RN 683233-76-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[[(2R)-1-methyl-2-piperidinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (2:3) (9CI) (CA INDEX NAME)

CM 1

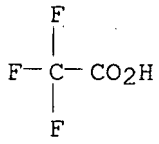
CRN 683233-75-2
CMF C28 H32 F6 N4 O2

Absolute stereochemistry.



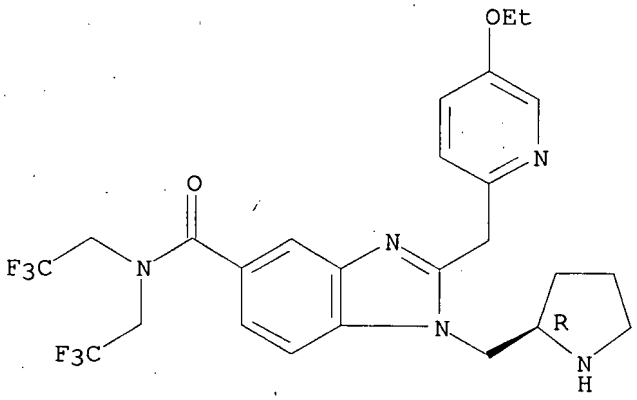

CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 683233-77-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-[(2R)-2-pyrrolidinylmethyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

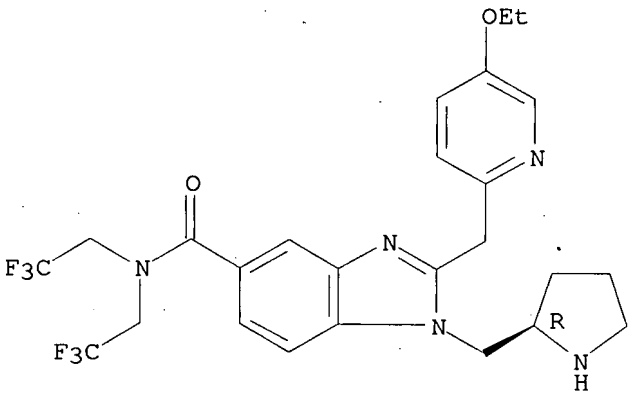


RN 683233-78-5 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-[(2R)-2-pyrrolidinylmethyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:11) (9CI) (CA INDEX NAME)

CM 1

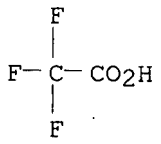
CRN 683233-77-4
CMF C25 H27 F6 N5 O2

Absolute stereochemistry.



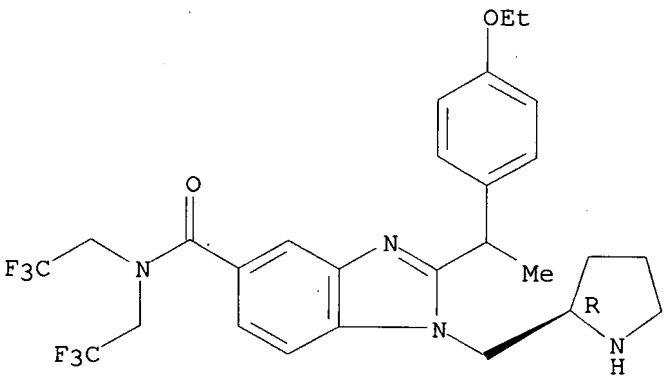
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 683233-79-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[1-(4-ethoxyphenyl)ethyl]-1-[(2R)-2-pyrrolidinylmethyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

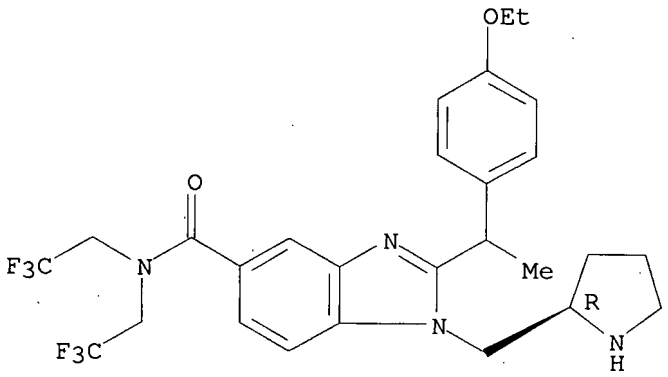


RN 683233-80-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[1-(4-ethoxyphenyl)ethyl]-1-[(2R)-2-pyrrolidinylmethyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

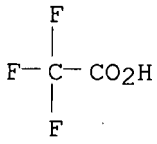
CRN 683233-79-6
CMF C27 H30 F6 N4 O2

Absolute stereochemistry.



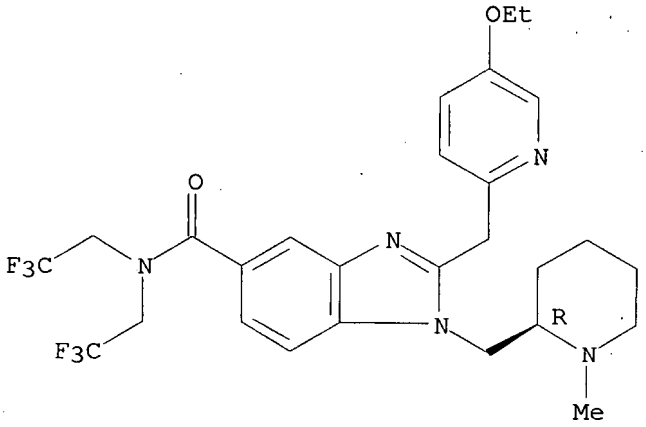
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 683233-81-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-[[(2R)-1-methyl-2-piperidinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

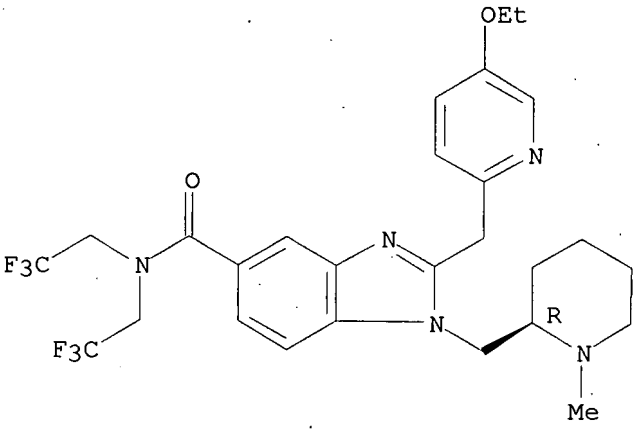


RN 683233-82-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-[[(2R)-1-methyl-2-piperidinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

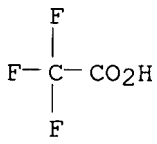
CRN 683233-81-0
CMF C27 H31 F6 N5 O2

Absolute stereochemistry.



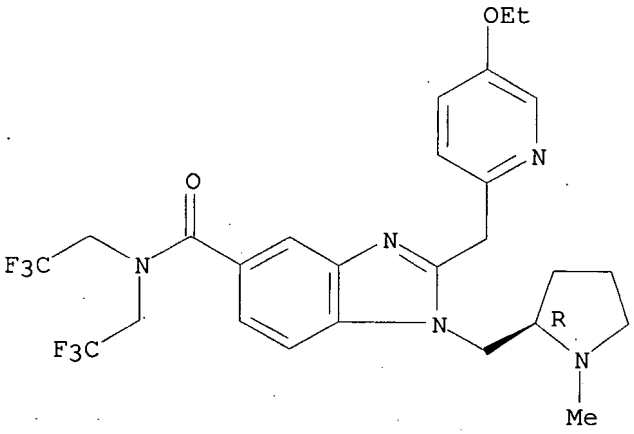
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 683233-84-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-[[(2R)-1-methyl-2-pyrrolidinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

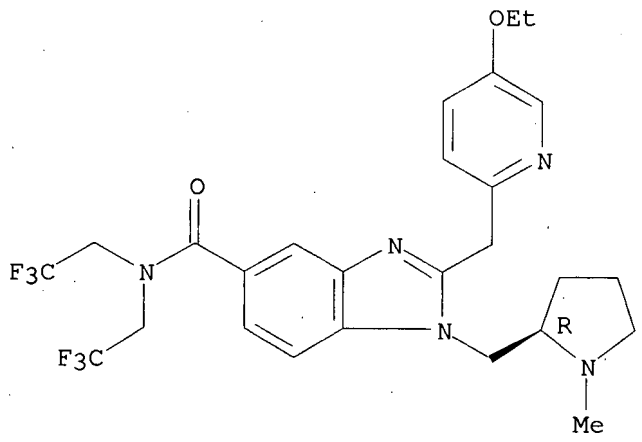


RN 683233-85-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-[[(2R)-1-methyl-2-pyrrolidinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

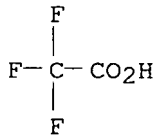
CRN 683233-84-3
CMF C26 H29 F6 N5 O2

Absolute stereochemistry.

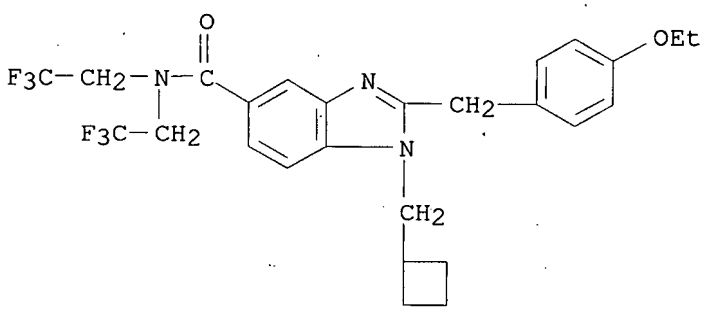


CM 2

CRN 76-05-1
CMF C2 H F3 O2



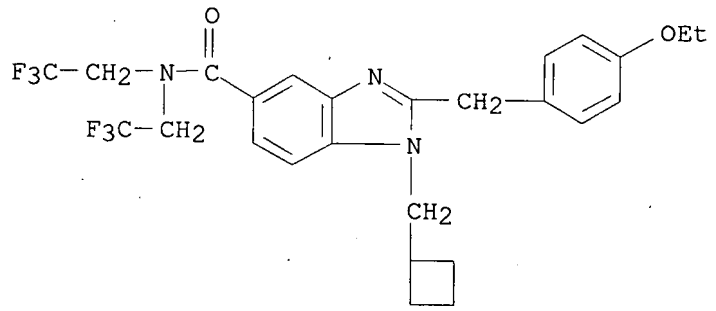
RN 683233-86-5 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclobutylmethyl)-2-[(4-ethoxyphenyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-87-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclobutylmethyl)-2-[(4-ethoxyphenyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:3) (9CI) (CA INDEX NAME)

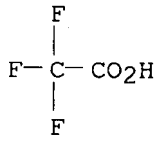
CM 1

CRN 683233-86-5
CMF C26 H27 F6 N3 O2

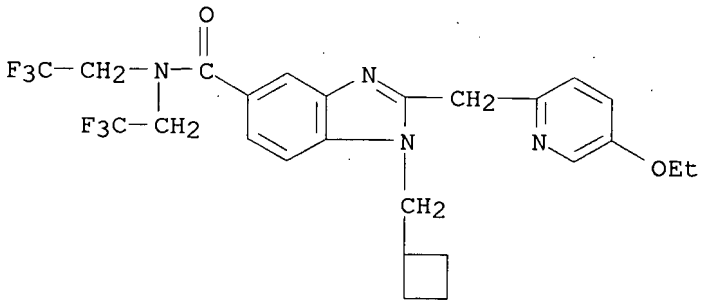


CM 2

CRN 76-05-1
CMF C2 H F3 O2



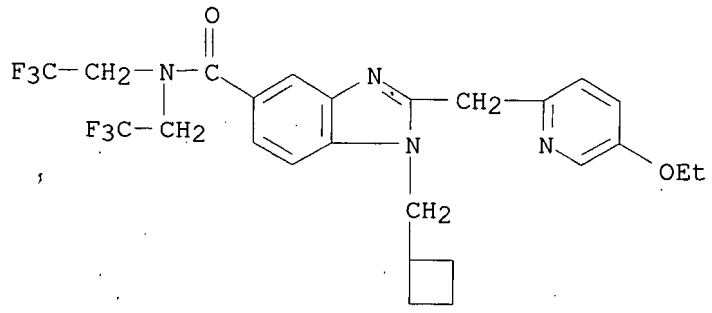
RN 683233-88-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclobutylmethyl)-2-[(5-ethoxy-2-pyridinyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-89-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclobutylmethyl)-2-[(5-ethoxy-2-pyridinyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (2:3) (9CI) (CA INDEX NAME)

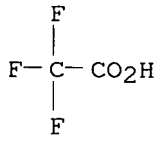
CM 1

CRN 683233-88-7
CMF C25 H26 F6 N4 O2

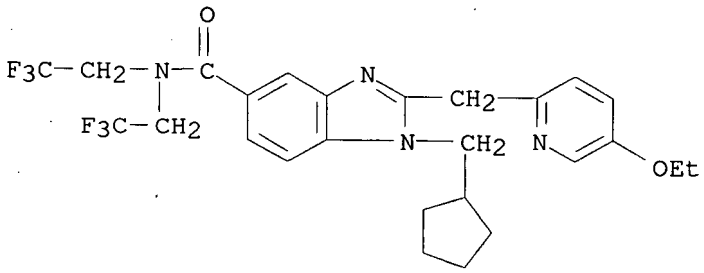


CM 2

CRN 76-05-1
CMF C2 H F3 O2



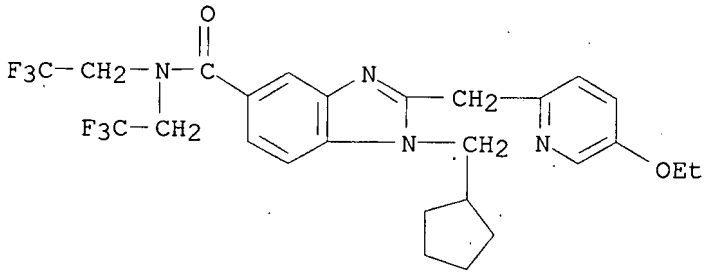
RN 683233-90-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopentylmethyl)-2-[(5-ethoxy-2-pyridinyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-91-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopentylmethyl)-2-[(5-ethoxy-2-pyridinyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (10:11) (9CI) (CA INDEX NAME)

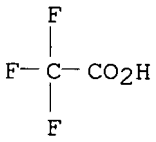
CM 1

CRN 683233-90-1
CMF C26 H28 F6 N4 O2



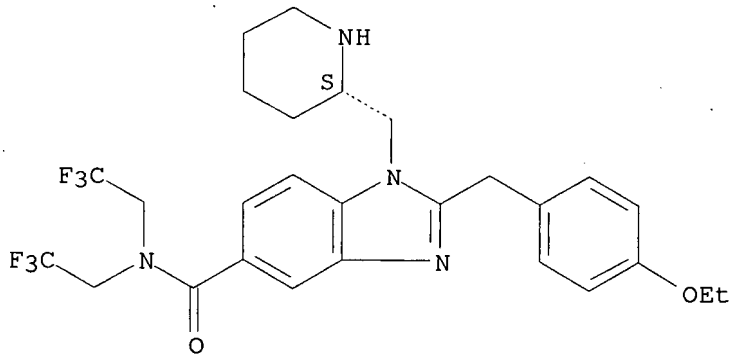
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 683233-92-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(2S)-2-piperidinylmethyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

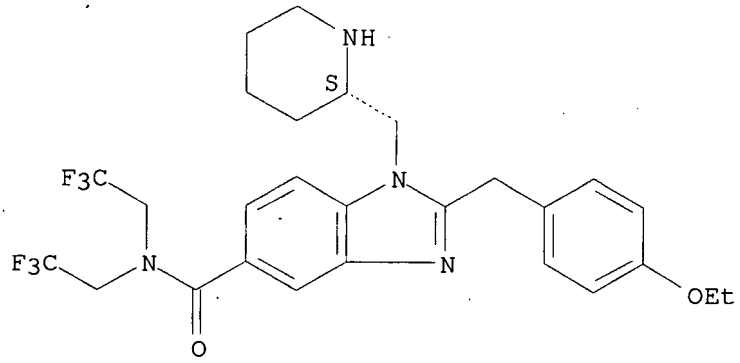


RN 683233-93-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(2S)-2-piperidinylmethyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

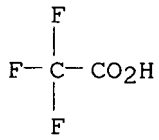
CRN 683233-92-3
CMF C27 H30 F6 N4 O2

Absolute stereochemistry.

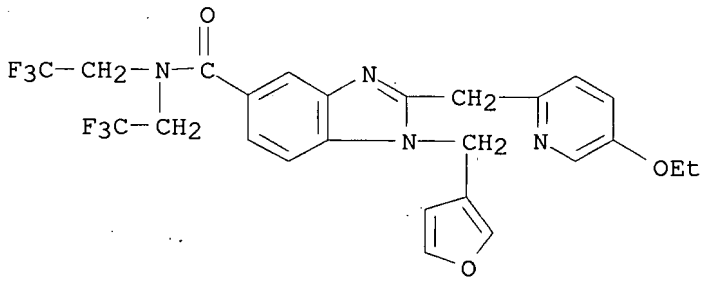


CM 2

CRN 76-05-1
CMF C2 H F3 O2



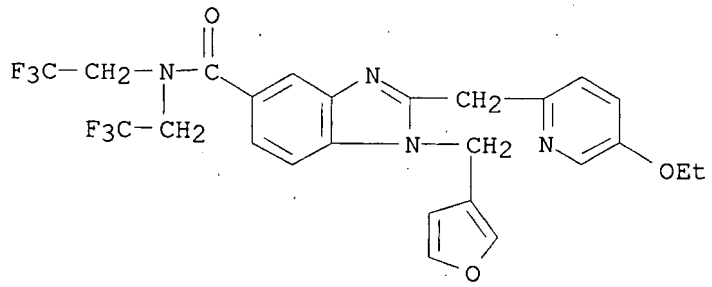
RN 683233-94-5 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-(3-furanylmethyl)-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-95-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-(3-furanylmethyl)-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:6) (9CI) (CA INDEX NAME)

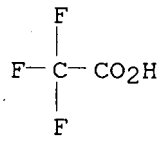
CM 1

CRN 683233-94-5
CMF C25 H22 F6 N4 O3

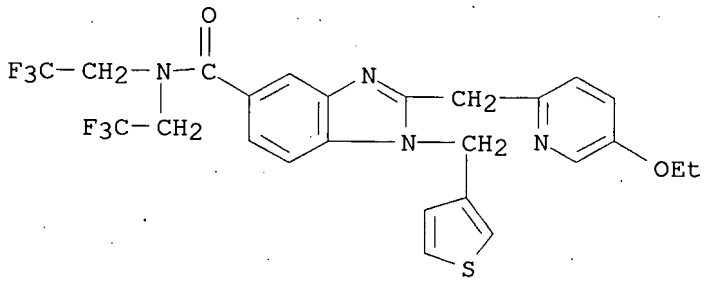


CM 2

CRN 76-05-1
CMF C2 H F3 O2



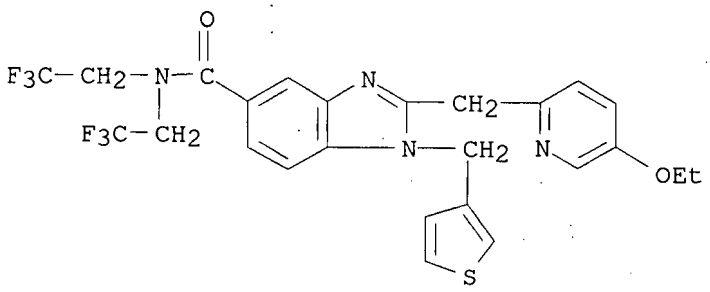
RN 683233-96-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-(3-thienylmethyl)-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-97-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-(3-thienylmethyl)-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (10:7) (9CI) (CA INDEX NAME)

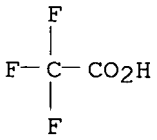
CM 1

CRN 683233-96-7
CMF C25 H22 F6 N4 O2 S

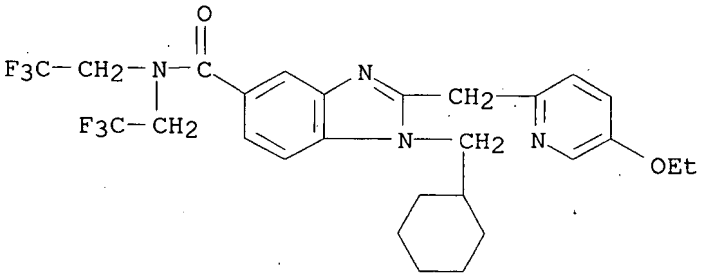


CM 2

CRN 76-05-1
CMF C2 H F3 O2



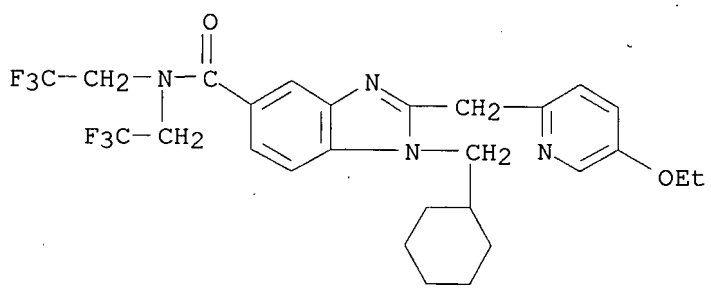
RN 683233-98-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclohexylmethyl)-2-[(5-ethoxy-2-pyridinyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683233-99-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclohexylmethyl)-2-[(5-ethoxy-2-pyridinyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (10:21) (9CI) (CA INDEX NAME)

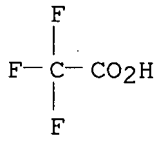
CM 1

CRN 683233-98-9
CMF C27 H30 F6 N4 O2

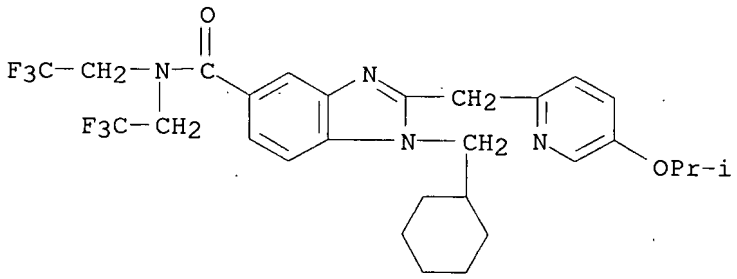


CM 2

CRN 76-05-1
CMF C2 H F3 O2



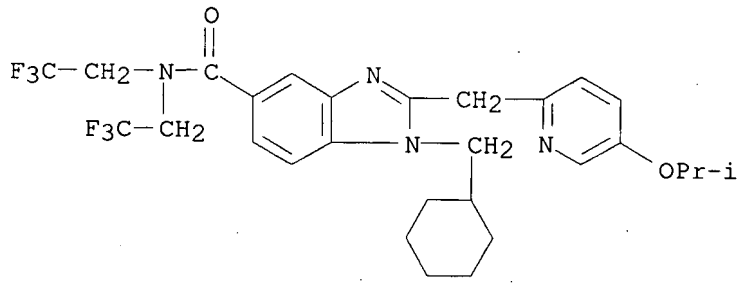
RN 683234-00-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclohexylmethyl)-2-[[5-(1-methylethoxy)-2-pyridinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683234-01-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclohexylmethyl)-2-[[5-(1-methylethoxy)-2-pyridinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:3) (9CI) (CA INDEX NAME)

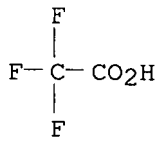
CM 1

CRN 683234-00-6
CMF C28 H32 F6 N4 O2

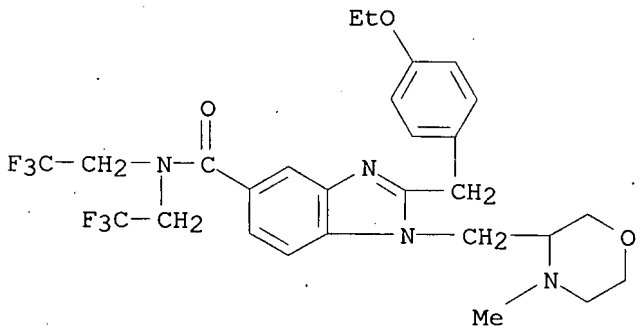


CM 2

CRN 76-05-1
CMF C2 H F3 O2



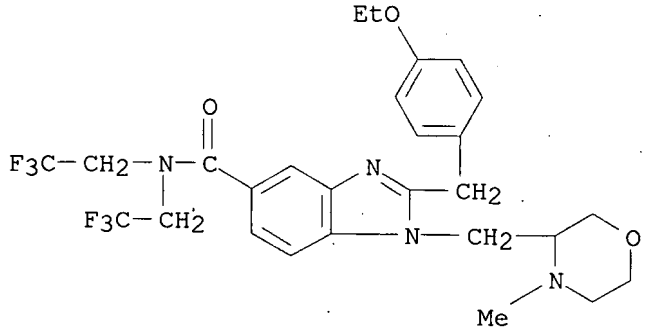
RN 683234-03-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(4-methyl-3-morpholinyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683234-04-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(4-methyl-3-morpholinyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:9) (9CI) (CA INDEX NAME)

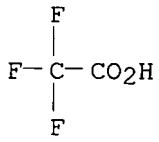
CM 1

CRN 683234-03-9
CMF C27 H30 F6 N4 O3

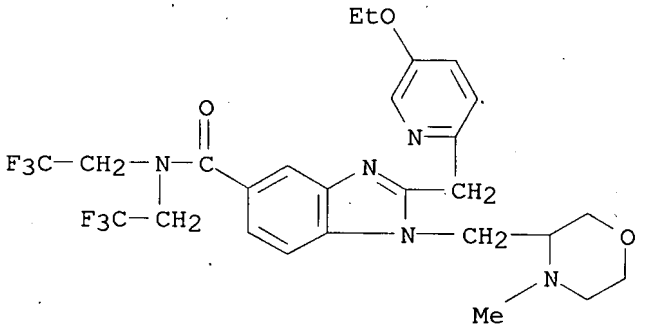



CM 2

CRN 76-05-1
CMF C2 H F3 O2



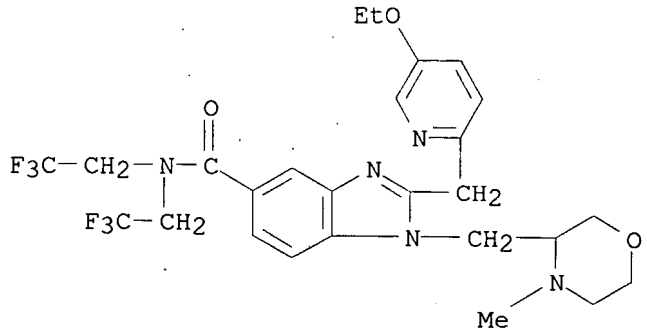

RN 683234-05-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-[(4-methyl-3-morpholinyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)




RN 683234-06-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-[(4-methyl-3-morpholinyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

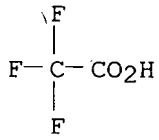
CM 1

CRN 683234-05-1
CMF C26 H29 F6 N5 O3



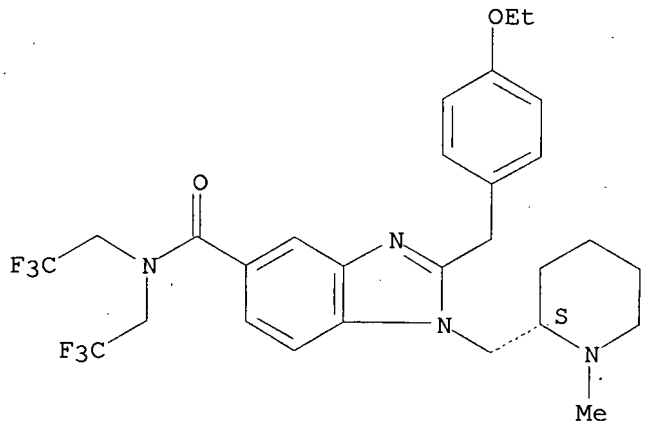
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 683234-07-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[[(2S)-1-methyl-2-piperidinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

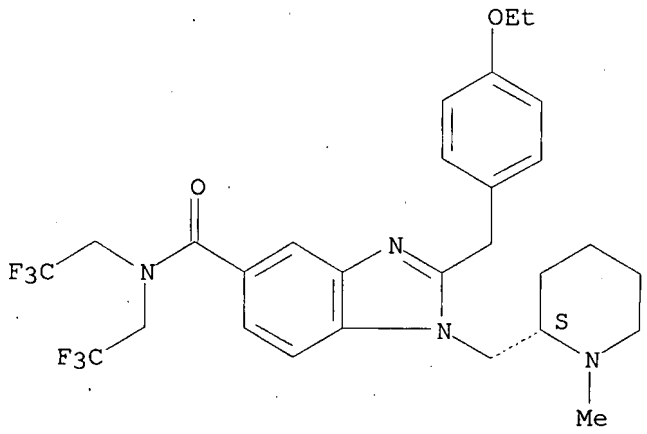


RN 683234-08-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[[(2S)-1-methyl-2-piperidinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (5:9) (9CI) (CA INDEX NAME)

CM 1

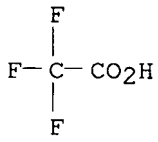
CRN 683234-07-3
CMF C28 H32 F6 N4 O2

Absolute stereochemistry.




CM 2

CRN 76-05-1
CMF C2 H F3 O2

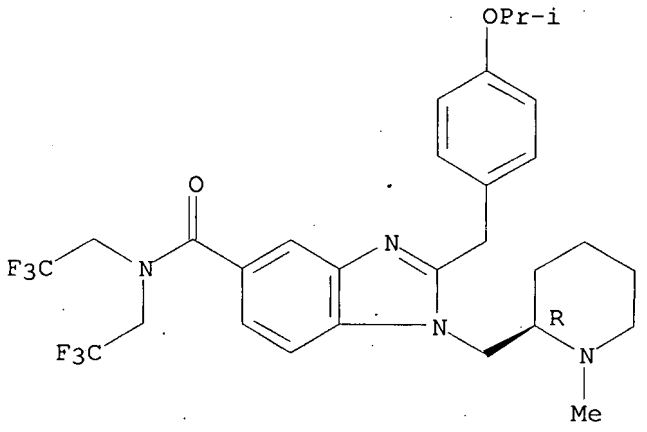



RN 683234-10-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[[4-(1-methylethoxy)phenyl]methyl]-1-[[(2R)-1-methyl-2-piperidinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)-, trifluoroacetate (10:23) (9CI) (CA INDEX NAME)

CM 1

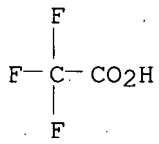
CRN 683234-09-5
CMF C29 H34 F6 N4 O2

Absolute stereochemistry.

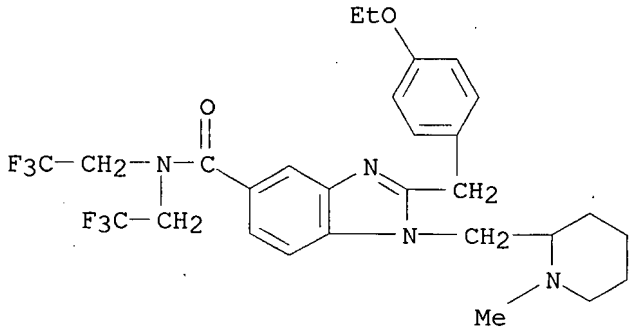



CM 2

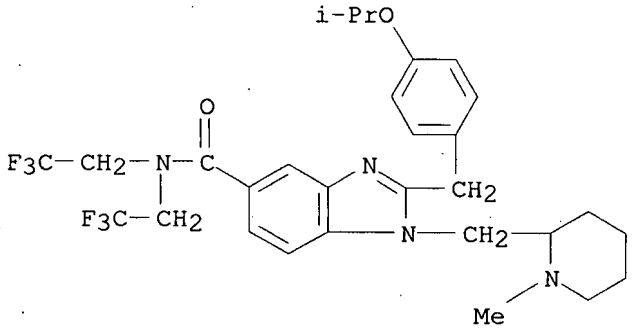
CRN 76-05-1
CMF C2 H F3 O2



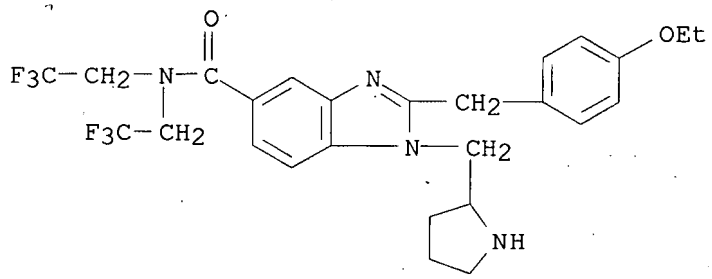
RN 683234-12-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-[(1-methyl-2-piperidinyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



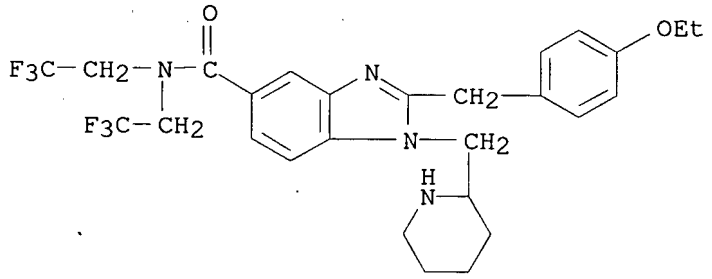
RN 683234-13-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[[4-(1-methylethoxy)phenyl]methyl]-1-[(1-methyl-2-piperidinyl)methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



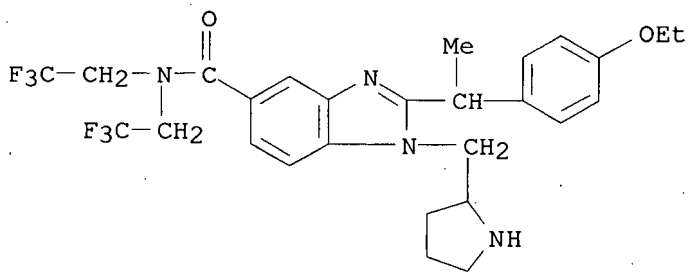
RN 683234-14-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-(2-pyrrolidinylmethyl)-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683234-15-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-1-(2-piperidinylmethyl)-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

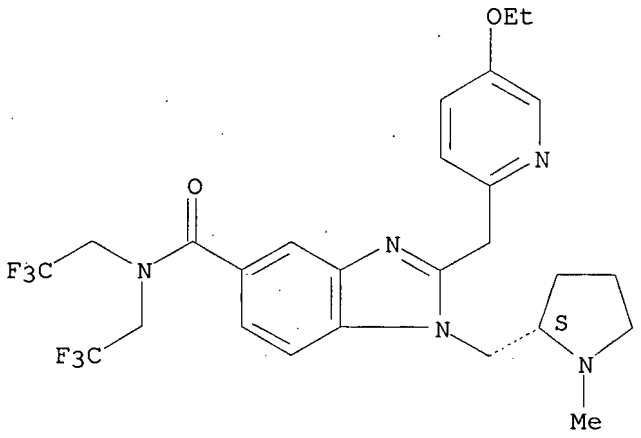


RN 683234-16-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[1-(4-ethoxyphenyl)ethyl]-1-(2-pyrrolidinylmethyl)-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)



RN 683234-17-5 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(5-ethoxy-2-pyridinyl)methyl]-1-[[(2S)-1-methyl-2-pyrrolidinyl]methyl]-N,N-bis(2,2,2-trifluoroethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

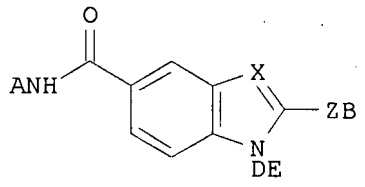



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:511305 CAPLUS
DOCUMENT NUMBER: 139:85348
TITLE: Preparation of benzimidazoles and indoles as glucagon receptor antagonists/inverse agonists.
INVENTOR(S): Lau, Jesper; Christensen, Inge Thoger; Madsen, Peter; Behrens, Carsten
PATENT ASSIGNEE(S): Novo Nordisk A/s, Den.
SOURCE: PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2003053938 | A1 | 20030703 | WO 2002-DK832 | 20021210 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2002347022 | A1 | 20030709 | AU 2002-347022 | 20021210 |
| PRIORITY APPLN. INFO.: | | | DK 2001-1925 A | 20011220 |
| | | | WO 2002-DK832 W | 20021210 |

OTHER SOURCE(S): MARPAT 139:85348
GI



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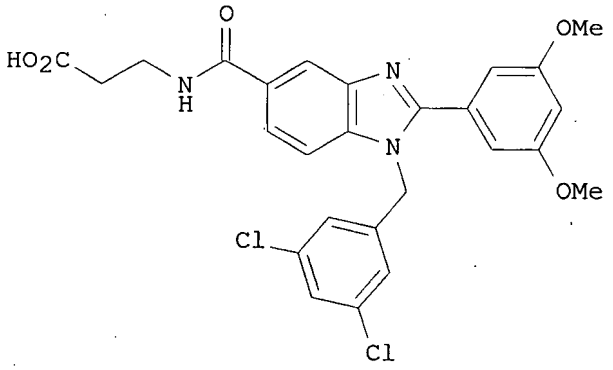


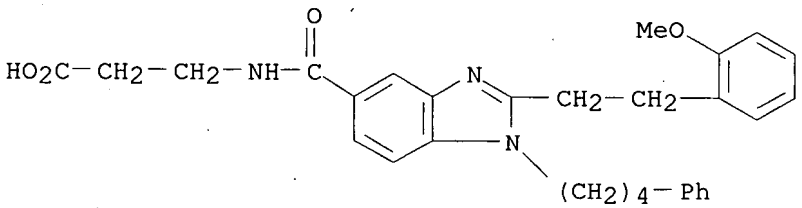
II

AB Title compds. [I; A = HO2C(CHR1)m(CH2)n, tetrazolylalkyl; m = 0, 1; n = 0-3; m+n ≠ 0; R1 = H, F, (CH2)oOR2; o = 0, 1; R2 = H, alkyl, alkanoyl, aryl, aralkyl; X = N, CH; B = (substituted) Ph, naphthyl, azolyl, fluorenyl, norbornenyl; D = (CH2)p, CHPh(CH2)p, (CH2)pO; p = 0-4; E = (substituted) Ph, pyridinyl, azolyl, cycloalkenyl, etc.; with the exception of a specific compound], were prepared Thus, title compound (II) and 26 addnl. I were prepared by solid phase synthesis using Fmoc-protected amino acids on Wang resin. Many I showed IC50<1000 nM in a glucagon receptor binding assay.

IT 552839-46-0P 552839-53-9P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of benzimidazoles and indoles as glucagon receptor antagonists/inverse agonists)

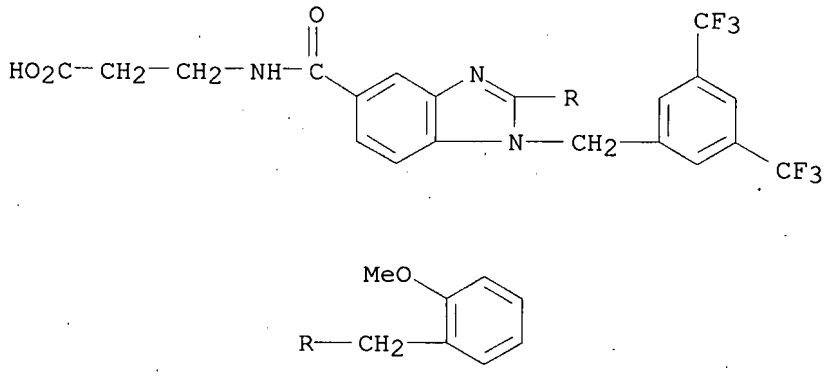
RN 552839-46-0 CAPLUS

CN β-Alanine, N-[[2-[2-(2-methoxyphenyl)ethyl]-1-(4-phenylbutyl)-1H-benzimidazol-5-yl]carbonyl]- (9CI) (CA INDEX NAME)



RN 552839-53-9 CAPLUS

CN β-Alanine, N-[[1-[[3,5-bis(trifluoromethyl)phenyl]methyl]-2-[(2-methoxyphenyl)methyl]-1H-benzimidazol-5-yl]carbonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

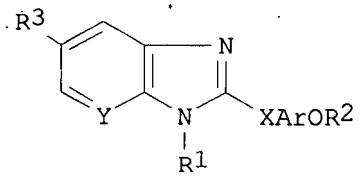
L5 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:832768 CAPLUS
DOCUMENT NUMBER: 137:337892
TITLE: Novel alkoxyarylbenzimidazoles as CB2 receptor agonists
INVENTOR(S): Cheng, Yun-Xing; Tomaszewski, Miroslaw; Walpole, Christopher; Yang, Hua
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.
SOURCE: PCT Int. Appl., 112 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2002085866 | A1 | 20021031 | WO 2002-SE769 | 20020418 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2444381 | A1 | 20021031 | CA 2002-2444381 | 20020418 |
| AU 2002307586 | A1 | 20021105 | AU 2002-307586 | 20020418 |
| EE 200300524 | A | 20040216 | EE 2003-524 | 20020418 |
| EP 1390350 | A1 | 20040225 | EP 2002-764120 | 20020418 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| HU 200303825 | A2 | 20040301 | HU 2003-3825 | 20020418 |
| BR 2002008907 | A | 20040420 | BR 2002-8907 | 20020418 |
| CN 1503787 | A | 20040609 | CN 2002-808577 | 20020418 |
| JP 2004528334 | T | 20040916 | JP 2002-583393 | 20020418 |
| NZ 528403 | A | 20050527 | NZ 2002-528403 | 20020418 |
| NZ 538692 | A | 20060929 | NZ 2002-538692 | 20020418 |
| ZA 2003007752 | A | 20050103 | ZA 2003-7752 | 20031003 |
| US 2004116465 | A1 | 20040617 | US 2003-474549 | 20031009 |
| US 7030139 | B2 | 20060418 | | |
| BG 108271 | A | 20041230 | BG 2003-108271 | 20031014 |
| NO 2003004665 | A | 20031210 | NO 2003-4665 | 20031017 |

| | | | | | |
|---|---|---|---|---|---|
| MX 2003PA09558 | A | 20040212 | MX 2003-PA9558 | | 20031017 |
| US 2006135554 | A1 | 20060622 | US 2006-325124 | | 20060104 |
| PRIORITY APPLN. INFO.: | | | SE 2001-1387 | A | 20010420 |
| | | | NZ 2002-528403 | A1 | 20020418 |
| | | | WO 2002-SE769 | W | 20020418 |
| | | | US 2003-474549 | A3 | 20031009 |

OTHER SOURCE(S): MARPAT 137:337892

GI



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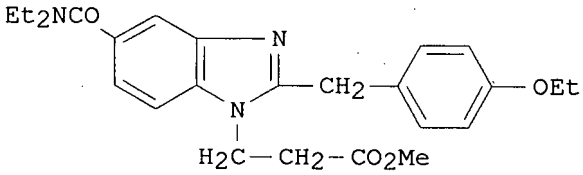


II

AB Title compds. I [R1 = (un)substituted alkyl, alkenyl; R2 = alkyl, fluoroalkyl, cycloalkyl; R3 = (un)substituted H2NCONH, HCONH, HO2CNH, H2NCSNH, HSO2NH, H2NSO2, H2NCH2, H2NCS, H2NCO, NH2, acyl; X = (un)substituted CH2, NH, CO, CH2CH2, CH:CH, O, S, S(O), SO2; Y = CH, N; Ar = (un)substituted aryl] were prepared as CB2 receptor agonists in the management of pain. Thus, 4,3-F(O2N)C6H3CONH2 was treated with H2NCH2CH2CO2Et followed by reduction of the nitro group and cyclization with 4-EtOC6H4CH2COCl to give the benzimidazole II, formed by transesterification during chromatog. II had Ki for human CB2 receptor binding of 142 nM.

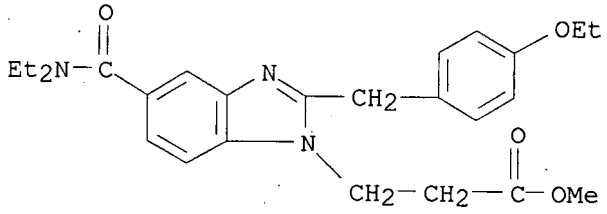
IT 474015-09-3P 474015-20-8P 474015-39-9P
474015-48-0P 474016-36-9P 474016-41-6P
474016-46-1P 474016-51-8P 474016-56-3P
474016-61-0P 474016-67-6P 474017-17-9P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of novel alkoxyarylbenzimidazoles as CB2 receptor agonists)

RN 474015-09-3 CAPLUS

CN 1H-Benzimidazole-1-propanoic acid, 5-[(diethylamino)carbonyl]-2-[(4-ethoxyphenyl)methyl]-, methyl ester, trifluoroacetate (5:9) (9CI) (CA INDEX NAME)

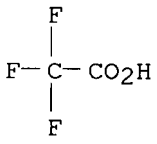
CM 1

CRN 474015-08-2
CMF C25 H31 N3 O4



CM 2

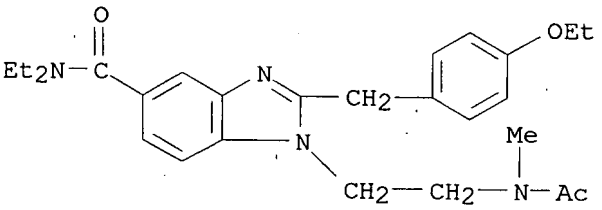
CRN 76-05-1
CMF C2 H F3 O2



RN 474015-20-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-[2-(acetylmethylamino)ethyl]-2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

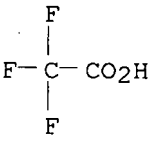
CM 1

CRN 474015-19-5
CMF C26 H34 N4 O3



CM 2

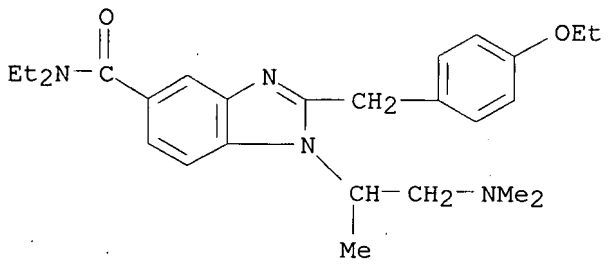
CRN 76-05-1
CMF C2 H F3 O2



RN 474015-39-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-[2-(dimethylamino)-1-methylethyl]-2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-, trifluoroacetate (2:5) (9CI) (CA INDEX NAME)

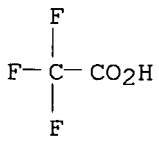
CM 1

CRN 474015-38-8
CMF C26 H36 N4 O2

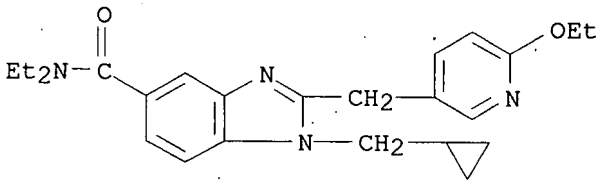


CM 2

CRN 76-05-1
CMF C2 H F3 O2



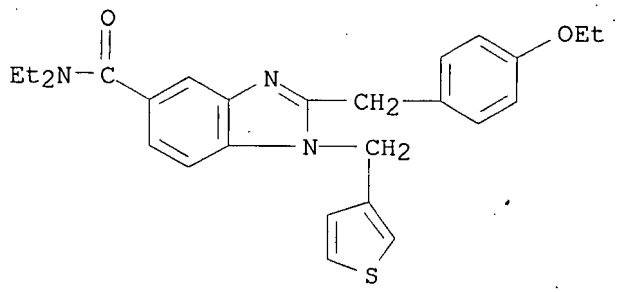
RN 474015-48-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopropylmethyl)-2-[(6-ethoxy-3-pyridinyl)methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



RN 474016-36-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-(3-thienylmethyl)-, trifluoroacetate (10:17) (9CI) (CA INDEX NAME)

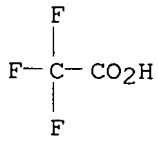
CM 1

CRN 474016-35-8
CMF C26 H29 N3 O2 S



CM 2

CRN 76-05-1
CMF C2 H F3 O2

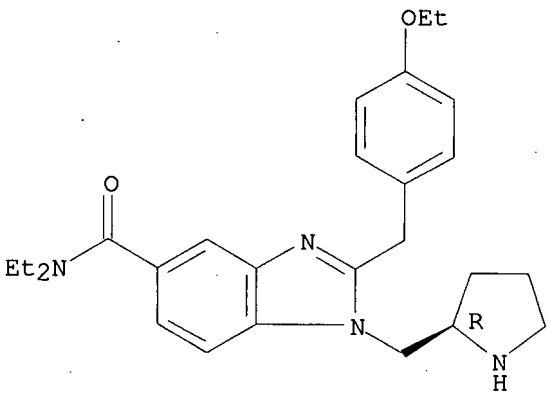


RN 474016-41-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-[(2R)-2-pyrrolidinylmethyl]-, trifluoroacetate (5:11) (9CI) (CA INDEX NAME)

CM 1

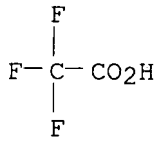
CRN 474016-40-5
CMF C26 H34 N4 O2

Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

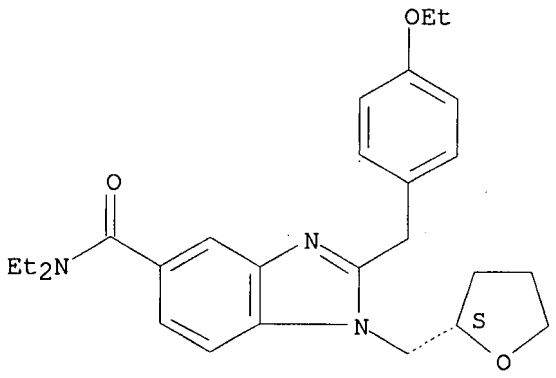


RN 474016-46-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-[[(2S)-tetrahydro-2-furanyl]methyl]-, trifluoroacetate (2:5) (9CI) (CA INDEX NAME)

CM 1

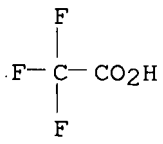
CRN 474016-45-0
CMF C26 H33 N3 O3

Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

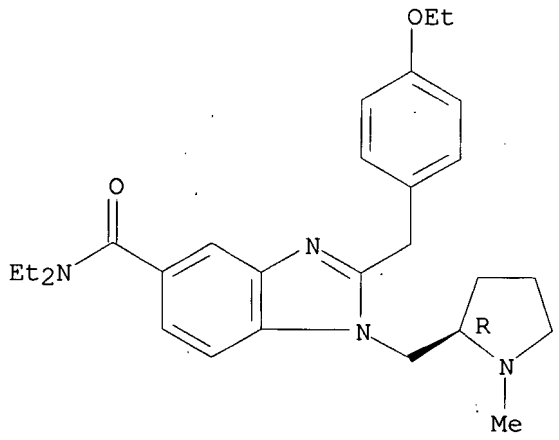


RN 474016-51-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-[[(2R)-1-methyl-2-pyrrolidinyl]methyl]-, trifluoroacetate (5:12) (9CI) (CA INDEX NAME)

CM 1

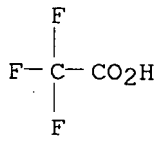
CRN 474016-50-7
CMF C27 H36 N4 O2

Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

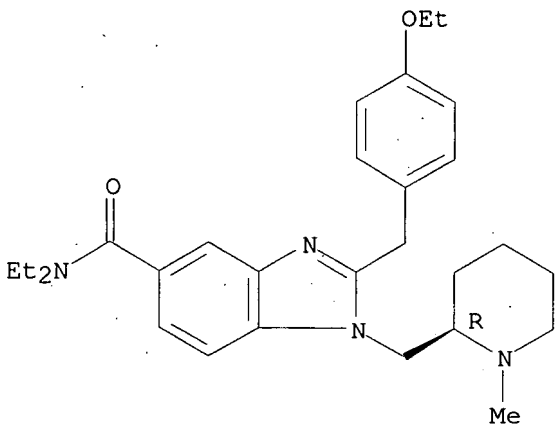


RN 474016-56-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-[[(2R)-1-methyl-2-piperidinyl]methyl]-, trifluoroacetate (10:21) (9CI) (CA INDEX NAME)

CM 1

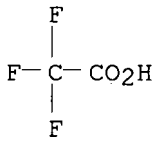
CRN 474016-55-2
CMF C28 H38 N4 O2

Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

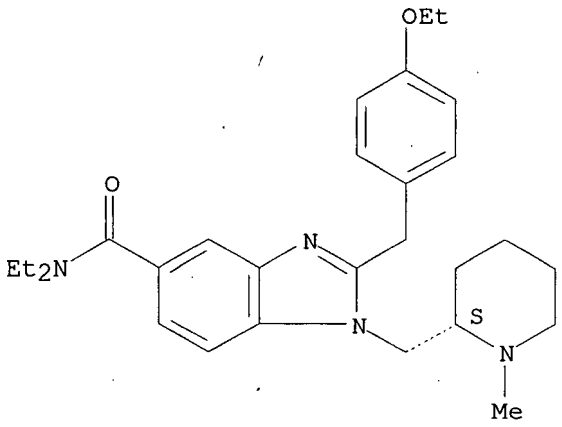


RN 474016-61-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-[[(2S)-1-methyl-2-piperidinyl]methyl]-, trifluoroacetate (10:21) (9CI) (CA INDEX NAME)

CM 1

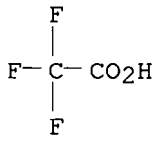
CRN 474016-60-9
CMF C28 H38 N4 O2

Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

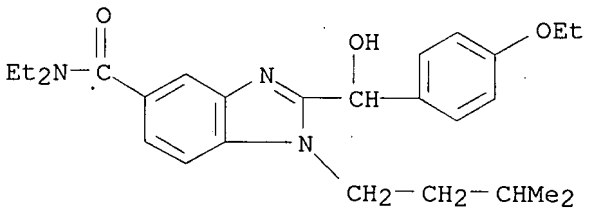


RN 474016-67-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)hydroxymethyl]-N,N-diethyl-1-(3-methylbutyl)-, trifluoroacetate (5:6) (salt) (9CI) (CA INDEX NAME)

CM 1

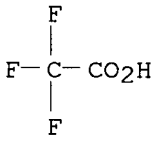
CRN 474016-66-5

CMF C26 H35 N3 O3

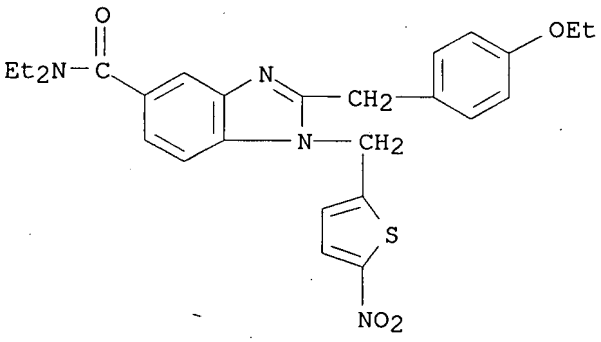


CM 2

CRN 76-05-1
CMF C2 H F3 O2



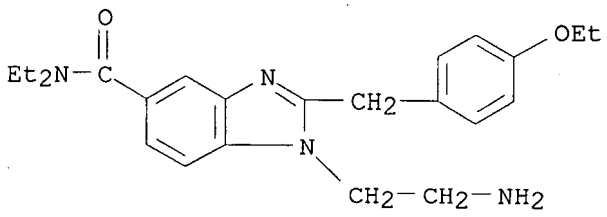
RN 474017-17-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-[(5-nitro-2-thienyl)methyl]- (9CI) (CA INDEX NAME)



IT 474015-15-1P 474015-62-8P 474015-69-5P
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of novel alkoxyarylbenzimidazoles as CB2 receptor agonists)
RN 474015-15-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(2-aminoethyl)-2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-, trifluoroacetate (5:14) (9CI) (CA INDEX NAME)

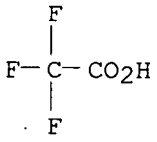
CM 1

CRN 474015-14-0
CMF C23 H30 N4 O2



CM 2

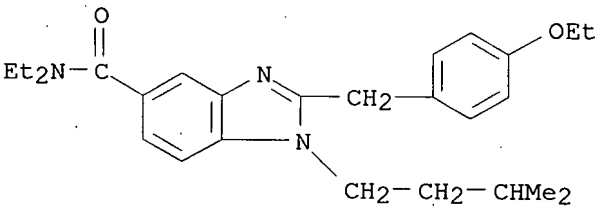
CRN 76-05-1
CMF C2 H F3 O2



RN 474015-62-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-(3-methylbutyl)-, trifluoroacetate (10:17) (9CI) (CA INDEX NAME)

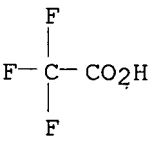
CM 1

CRN 474015-61-7
CMF C26 H35 N3 O2

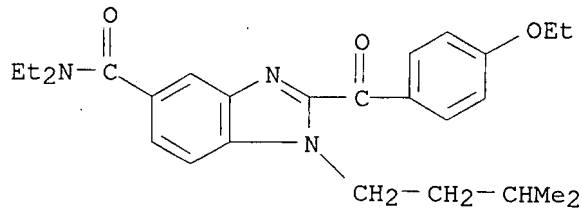


CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 474015-69-5 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-(4-ethoxybenzoyl)-N,N-diethyl-1-(3-methylbutyl)- (9CI) (CA INDEX NAME)

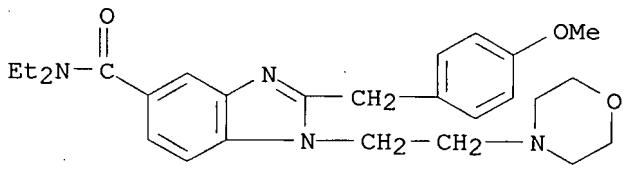


IT 474014-92-1P 474014-98-7P 474015-03-7P
474015-25-3P 474015-29-7P 474015-37-7P
474015-44-6P 474015-52-6P 474015-56-0P
474015-66-2P 474015-71-9P 474015-73-1P
474016-14-3P 474017-37-3P 474017-41-9P
474017-45-3P 474017-49-7P 474017-52-2P
474017-58-8P 474017-65-7P 474017-86-2P
474017-92-0P 474017-99-7P 474018-02-5P
474018-06-9P 474018-09-2P 474018-13-8P
474018-15-0P 474018-19-4P 474018-22-9P
474018-24-1P 474018-27-4P 474018-31-0P
474018-34-3P 474018-66-1P 474018-69-4P
474019-56-2P 474019-59-5P 474020-70-7P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of novel alkoxyarylbenzimidazoles as CB2 receptor agonists)

RN 474014-92-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, N,N-diethyl-2-[(4-methoxyphenyl)methyl]-1-[2-(4-morpholinyl)ethyl]-, tris(trifluoroacetate) (9CI) (CA INDEX NAME)

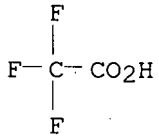
CM 1

CRN 474014-91-0
CMF C26 H34 N4 O3



CM 2

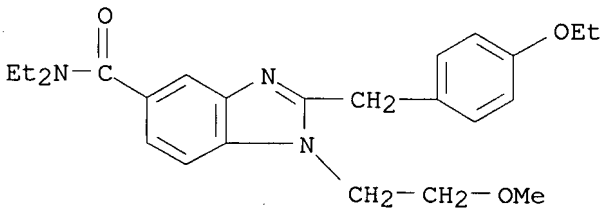
CRN 76-05-1
CMF C2 H F3 O2



RN 474014-98-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-(2-methoxyethyl)-, trifluoroacetate (5:11) (9CI) (CA INDEX NAME)

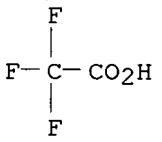
CM 1

CRN 474014-97-6
CMF C24 H31 N3 O3



CM 2

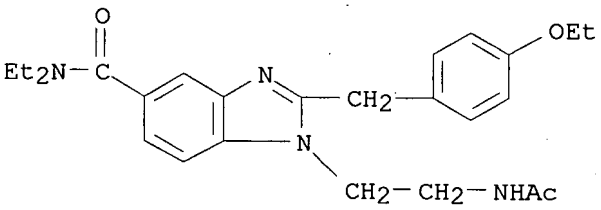
CRN 76-05-1
CMF C2 H F3 O2



RN 474015-03-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-[2-(acetylamino)ethyl]-2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-, trifluoroacetate (10:21) (9CI) (CA INDEX NAME)

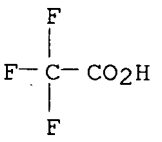
CM 1

CRN 474015-02-6
CMF C25 H32 N4 O3



CM 2

CRN 76-05-1
CMF C2 H F3 O2

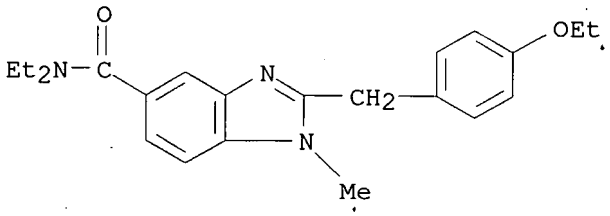


RN 474015-25-3 CAPLUS

CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-methyl-, trifluoroacetate (10:21) (9CI) (CA INDEX NAME)

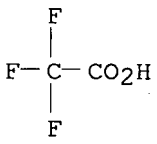
CM 1

CRN 474015-24-2
CMF C22 H27 N3 O2



CM 2

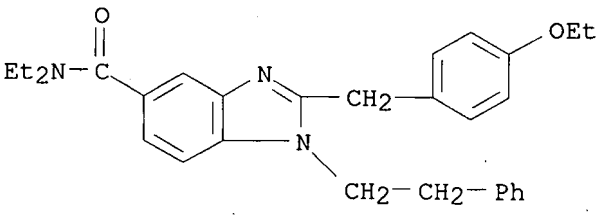
CRN 76-05-1
CMF C2 H F3 O2



RN 474015-29-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-(2-phenylethyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

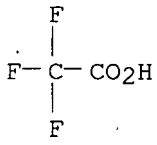
CM 1

CRN 474015-28-6
CMF C29 H33 N3 O2



CM 2

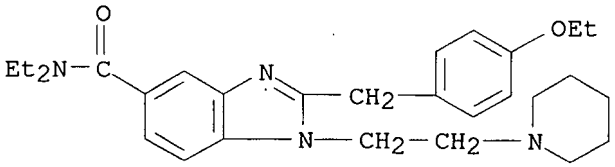
CRN 76-05-1
CMF C2 H F3 O2



RN 474015-37-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-[2-(1-piperidinyl)ethyl]-, trifluoroacetate (5:13) (9CI) (CA INDEX NAME)

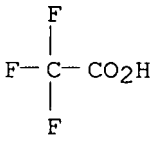
CM 1

CRN 474015-36-6
CMF C28 H38 N4 O2



CM 2

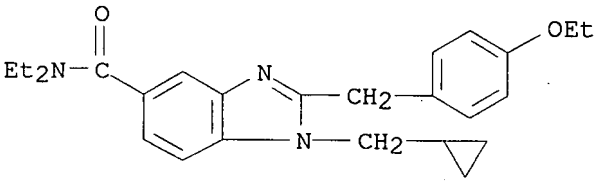
CRN 76-05-1
CMF C2 H F3 O2



RN 474015-44-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopropylmethyl)-2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-, trifluoroacetate (10:19) (9CI) (CA INDEX NAME)

CM 1

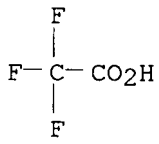
CRN 474015-43-5
CMF C25 H31 N3 O2



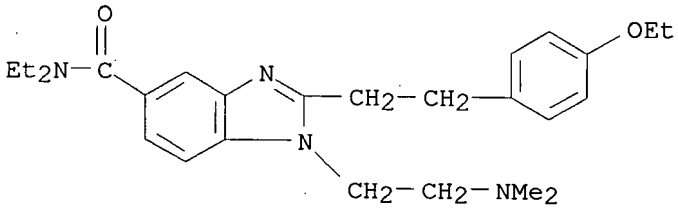
CM 2

CRN 76-05-1

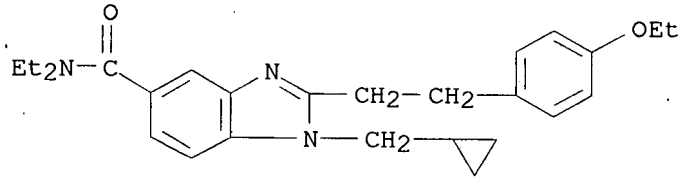
CMF C2 H F3 O2



RN 474015-52-6 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-[2-(dimethylamino)ethyl]-2-[2-(4-ethoxyphenyl)ethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



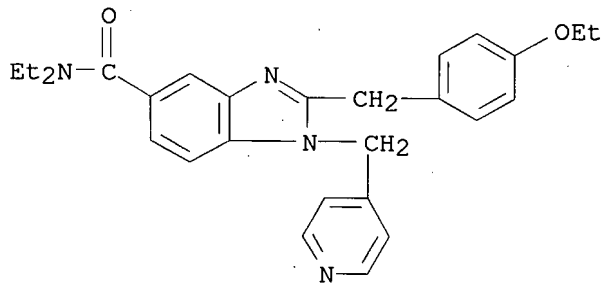
RN 474015-56-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopropylmethyl)-2-[2-(4-ethoxyphenyl)ethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



RN 474015-66-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-(4-pyridinylmethyl)-, trifluoroacetate (10:21) (9CI) (CA INDEX NAME)

CM 1

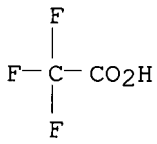
CRN 474015-65-1
CMF C27 H30 N4 O2



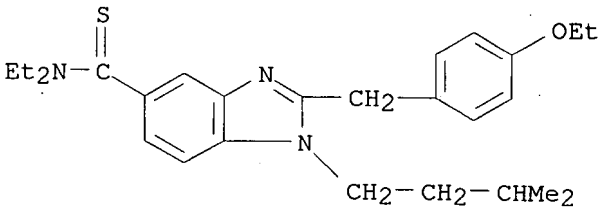
CM 2

CRN 76-05-1

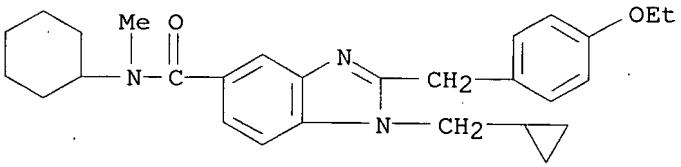
CMF C2 H F3 O2



RN 474015-71-9 CAPLUS
CN 1H-Benzimidazole-5-carbothioamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-(3-methylbutyl)- (9CI) (CA INDEX NAME)

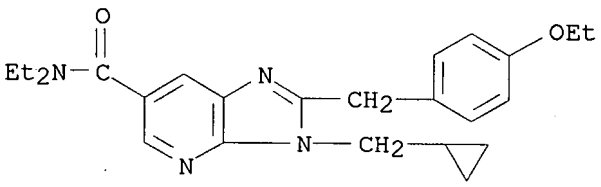


RN 474015-73-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, N-cyclohexyl-1-(cyclopropylmethyl)-2-[(4-ethoxyphenyl)methyl]-N-methyl-, hydrochloride (5:11) (9CI) (CA INDEX NAME)

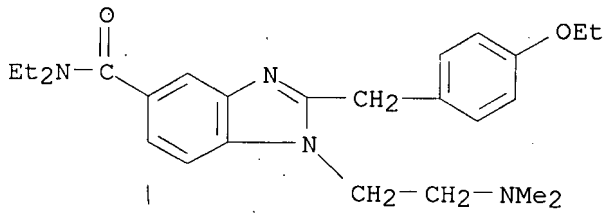


●11/5 HCl

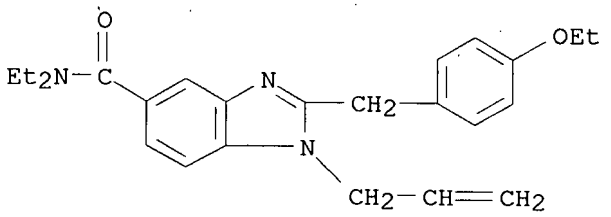
RN 474016-14-3 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine-6-carboxamide, 3-(cyclopropylmethyl)-2-[(4-ethoxyphenyl)methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



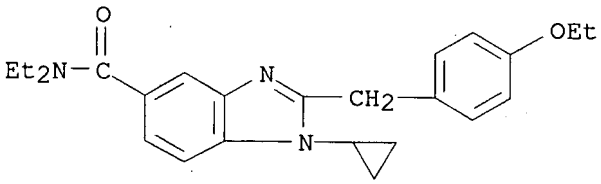
RN 474017-37-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-[2-(dimethylamino)ethyl]-2-[(4-ethoxyphenyl)methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



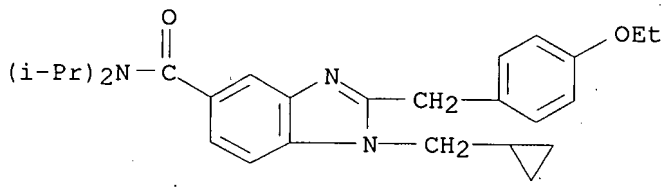
RN 474017-41-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-(2-propenyl)- (9CI) (CA INDEX NAME)



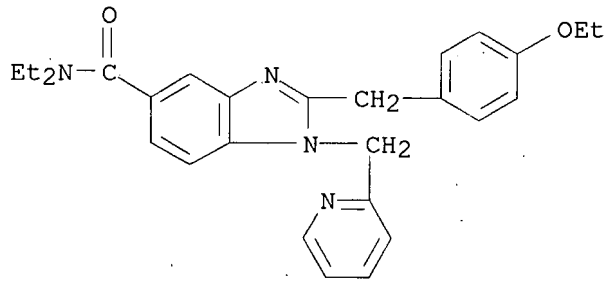
RN 474017-45-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-cyclopropyl-2-[(4-ethoxyphenyl)methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



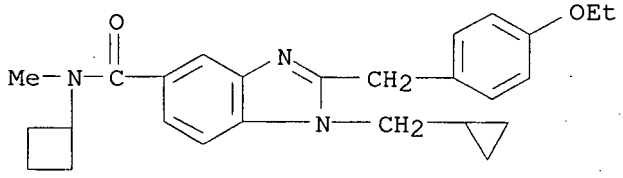
RN 474017-49-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopropylmethyl)-2-[(4-ethoxyphenyl)methyl]-N,N-bis(1-methylethyl)- (9CI) (CA INDEX NAME)



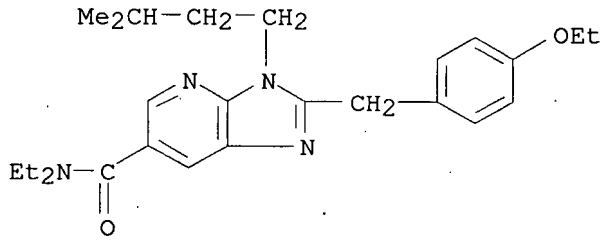
RN 474017-52-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-(2-pyridinylmethyl)- (9CI) (CA INDEX NAME)



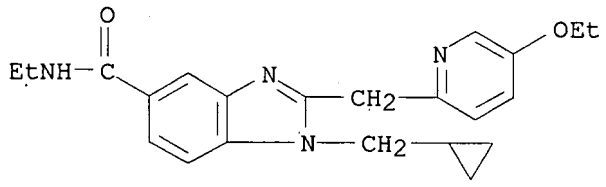
RN 474017-58-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, N-cyclobutyl-1-(cyclopropylmethyl)-2-[(4-ethoxyphenyl)methyl]-N-methyl- (9CI) (CA INDEX NAME)



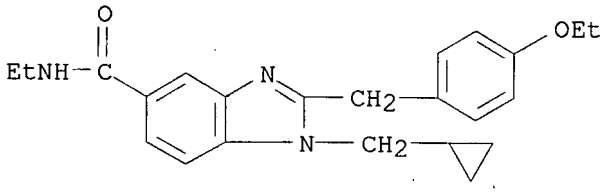
RN 474017-65-7 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine-6-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-3-(3-methylbutyl)- (9CI) (CA INDEX NAME)



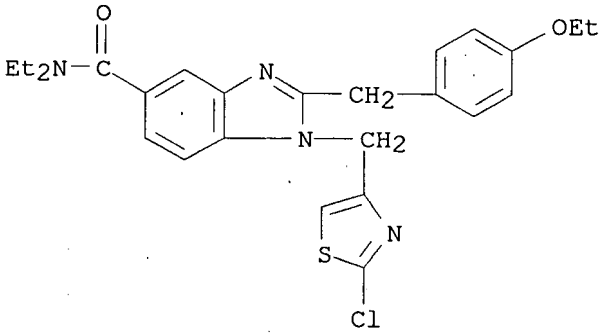
RN 474017-86-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopropylmethyl)-2-[(5-ethoxy-2-pyridinyl)methyl]-N-ethyl- (9CI) (CA INDEX NAME)



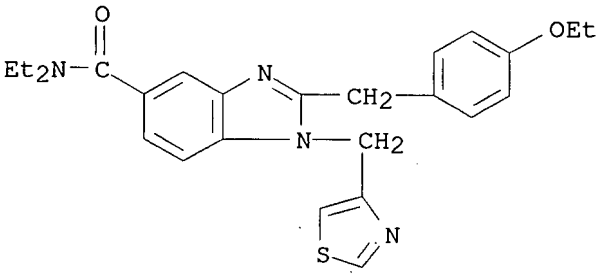
RN 474017-92-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopropylmethyl)-2-[(4-ethoxyphenyl)methyl]-N-ethyl- (9CI) (CA INDEX NAME)



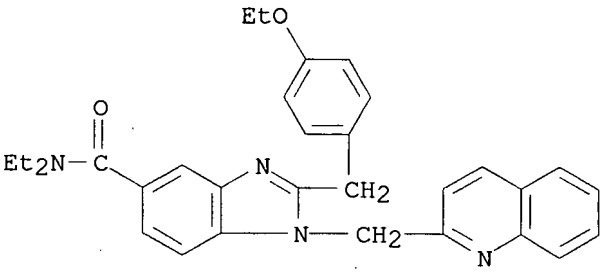
RN 474017-99-7 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-[(2-chloro-4-thiazolyl)methyl]-2-[(4-ethoxyphenyl)methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



RN 474018-02-5 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-(4-thiazolylmethyl)- (9CI) (CA INDEX NAME)

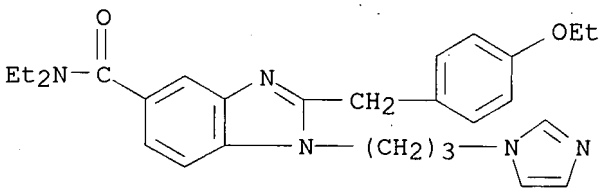


RN 474018-06-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-(2-quinolinylmethyl)- (9CI) (CA INDEX NAME)

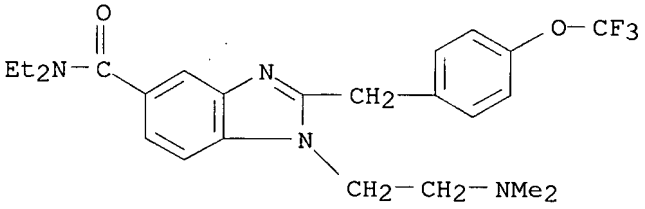


RN 474018-09-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1-

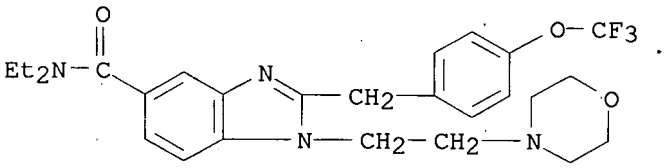
[3-(1H-imidazol-1-yl)propyl]- (9CI) (CA INDEX NAME)



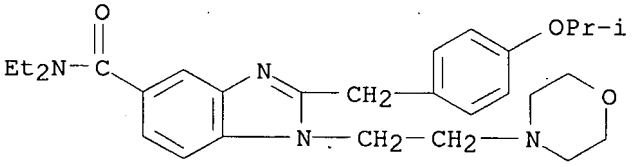
RN 474018-13-8 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-[2-(dimethylamino)ethyl]-N,N-diethyl-2-[[4-(trifluoromethoxy)phenyl]methyl]- (9CI) (CA INDEX NAME)



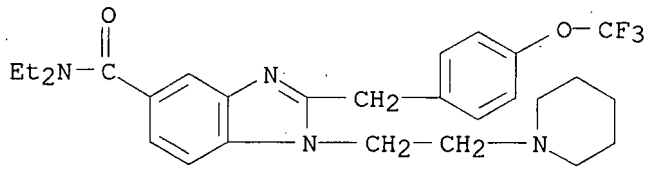
RN 474018-15-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, N,N-diethyl-1-[2-(4-morpholinyl)ethyl]-2-[[4-(trifluoromethoxy)phenyl]methyl]- (9CI) (CA INDEX NAME)



RN 474018-19-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, N,N-diethyl-2-[[4-(1-methylethoxy)phenyl]methyl]-1-[2-(4-morpholinyl)ethyl]- (9CI) (CA INDEX NAME)

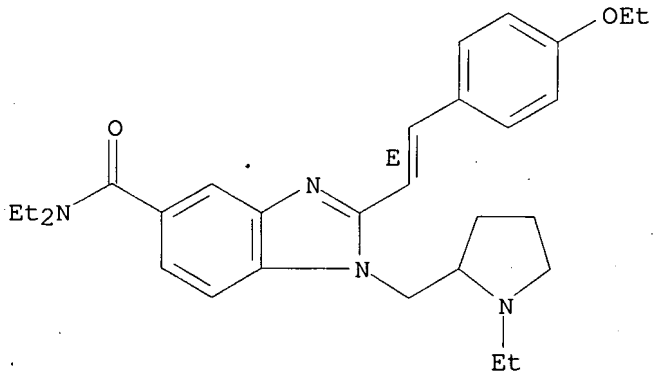


RN 474018-22-9 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, N,N-diethyl-1-[2-(1-piperidinyl)ethyl]-2-[[4-(trifluoromethoxy)phenyl]methyl]- (9CI) (CA INDEX NAME)

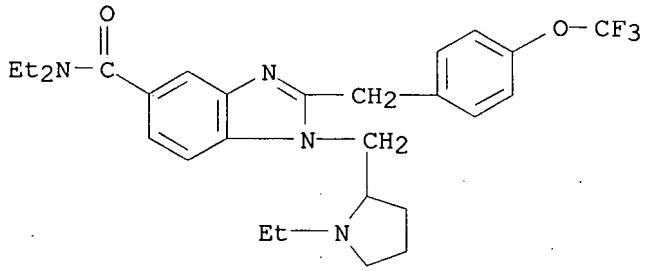


RN 474018-24-1 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 2-[(1E)-2-(4-ethoxyphenyl)ethenyl]-N,N-diethyl-1-[(1-ethyl-2-pyrrolidinyl)methyl]- (9CI) (CA INDEX NAME)

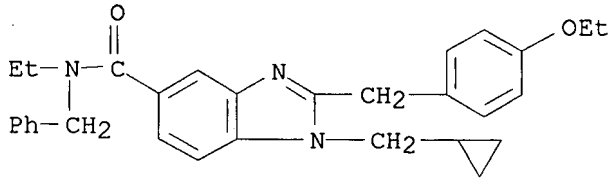
Double bond geometry as shown.



RN 474018-27-4 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, N,N-diethyl-1-[(1-ethyl-2-pyrrolidinyl)methyl]-2-[[4-(trifluoromethoxy)phenyl]methyl]- (9CI) (CA INDEX NAME)



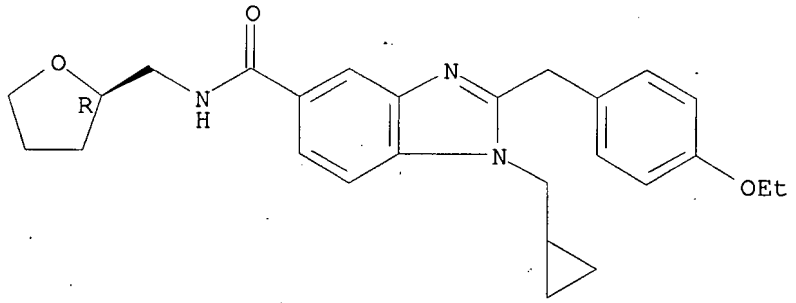
RN 474018-31-0 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopropylmethyl)-2-[(4-ethoxyphenyl)methyl]-N-ethyl-N-(phenylmethyl)- (9CI) (CA INDEX NAME)



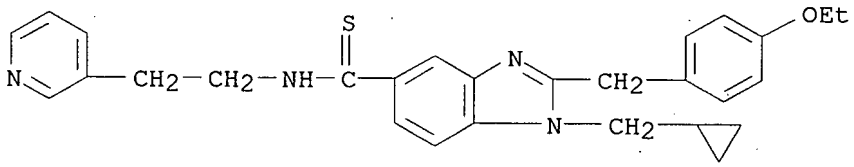
RN 474018-34-3 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopropylmethyl)-2-[(4-ethoxyphenyl)methyl]-N-[[(2R)-tetrahydro-2-furanyl]methyl]- (9CI) (CA

INDEX NAME)

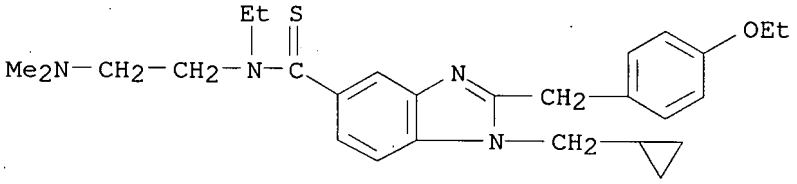
Absolute stereochemistry.



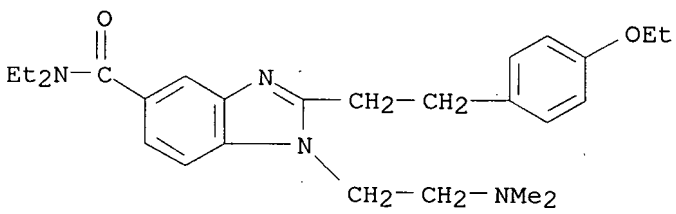
RN 474018-66-1 CAPLUS
CN 1H-Benzimidazole-5-carbothioamide, 1-(cyclopropylmethyl)-2-[(4-ethoxyphenyl)methyl]-N-[2-(3-pyridinyl)ethyl]- (9CI) (CA INDEX NAME)



RN 474018-69-4 CAPLUS
CN 1H-Benzimidazole-5-carbothioamide, 1-(cyclopropylmethyl)-N-[2-(dimethylamino)ethyl]-2-[(4-ethoxyphenyl)methyl]-N-ethyl- (9CI) (CA INDEX NAME)



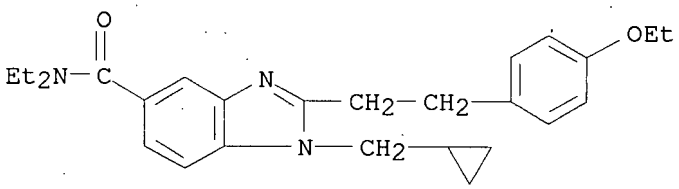
RN 474019-56-2 CAPLUS
CN 1H-Benzimidazole-5-carboxamide, 1-[2-(dimethylamino)ethyl]-2-[2-(4-ethoxyphenyl)ethyl]-N,N-diethyl-, hydrochloride (5:14) (9CI) (CA INDEX NAME)



●14/5 HCl

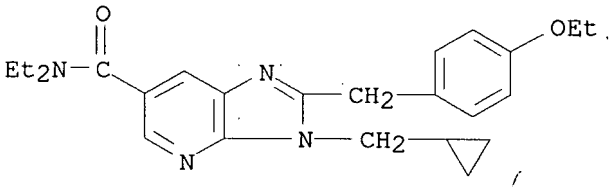
RN 474019-59-5 CAPLUS

CN 1H-Benzimidazole-5-carboxamide, 1-(cyclopropylmethyl)-2-[2-(4-ethoxyphenyl)ethyl]-N,N-diethyl-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

RN 474020-70-7 CAPLUS
CN 3H-Imidazo[4,5-b]pyridine-6-carboxamide, 3-(cyclopropylmethyl)-2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-, monohydrochloride (9CI) (CA INDEX NAME)



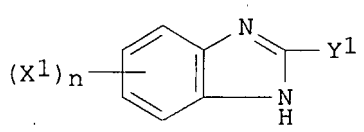
● HCl

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

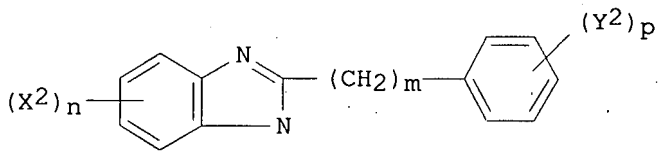
L5 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:87826 CAPLUS
DOCUMENT NUMBER: 124:218061
TITLE: Manufacture of printed circuit board
INVENTOR(S): Oono, Takao; Akaike, Shinichi
PATENT ASSIGNEE(S): Tamura Kaken Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 07307552 | A | 19951121 | JP 1994-119657 | 19940510 |
| PRIORITY APPLN. INFO.: | | | JP 1994-119657 | 19940510 |

OTHER SOURCE(S): MARPAT 124:218061
GI



I



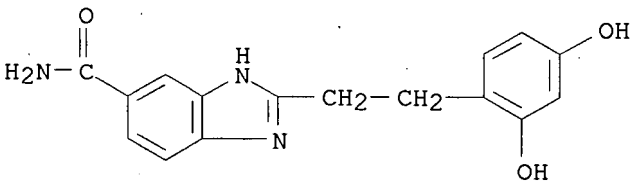
II

AB To form a circuit wiring pattern having through holes a Cu-coated substrate is etched after forming an etching resist film on through holes and in their periphery using a solution containing ≥1 benzimidazole compound I (X1 = halo, NH2, lower dialkylamino, OH, lower alkoxy, CN, Ac, benzoyl, NH2CO, CHO, COOH, lower alkoxycarbonyl, NO2; Y1 = C1-20 (branched) alkyl; n = 1-4), II (X2, Y2 (sic) = halo, NH2, lower dialkylamino, OH, lower alkoxy, CN, Ac, benzoyl, NH2CO, CHO, COOH, lower alkoxycarbonyl, NO2; Y2 = C1-7 (branched) alkyl; n, p = 0-4; m = 1-10), and/or its salt. The resist film may be heated or oxidized before etching.

IT 152937-37-6
RL: TEM (Technical or engineered material use); USES (Uses)
(etching resist films containing benzimidazole derivative for patterning of printed circuit boards)

RN 152937-37-6 CAPLUS

CN 1H-Benzimidazole-5-carboxamide, 2-[2-(2,4-dihydroxyphenyl)ethyl]- (9CI) (CA INDEX NAME)



L5 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:137286 CAPLUS

DOCUMENT NUMBER: 120:137286

TITLE: Heat-resistant protective agents for printed circuit boards

INVENTOR(S): Sasahara, Yasumichi; Shibata, Seiji

PATENT ASSIGNEE(S): Tamura Kaken Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

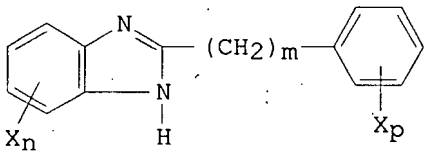
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 05186888 | A | 19930727 | JP 1992-157615 | 19920617 |
| JP 3112744 | B2 | 20001127 | | |

PRIORITY APPLN. INFO.: JP 1991-232877 A1 19910912

OTHER SOURCE(S): MARPAT 120:137286

GI



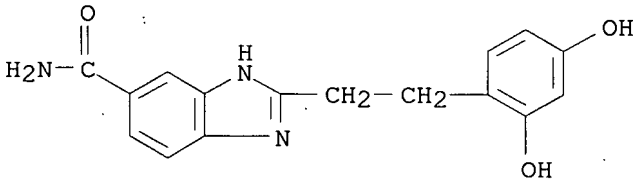
I

AB The title agents contain I (X = C1-7 alkyl, halo, NH2, OH, CN, AcO, BzO, CO2H, NO2, low alkoxy, di-(low)alkylamino, carbamoyl, formyl, low alkoxycarbonyl). Soaking an etched Cu plate in an aqueous solution containing tartaric acid and 2-(8-phenyloctyl)benzoimidazole gave a plate with good heat and moisture resistance and solderability.

IT 152937-37-6
RL: USES (Uses)
(aqueous solns. of, as protective agents, for printed circuit boards, for solderability)

RN 152937-37-6 CAPLUS

CN 1H-Benzimidazole-5-carboxamide, 2-[2-(2,4-dihydroxyphenyl)ethyl]- (9CI) (CA INDEX NAME)



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(FILE 'HOME' ENTERED AT 08:37:52 ON 11 SEP 2007)

FILE 'REGISTRY' ENTERED AT 08:38:01 ON 11 SEP 2007
L1 STRUCTURE UPLOADED
L2 8 S L1
L3 47 S SCAN
L4 157 S L2 FULL

FILE 'CAPLUS' ENTERED AT 08:38:48 ON 11 SEP 2007
L5 9 S L4 FULL

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| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | -7.02 | -7.02 |

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| NEWS 5 | MAY 21 | BIOSIS reloaded and enhanced with archival data |
| NEWS 6 | MAY 21 | TOXCENTER enhanced with BIOSIS reload |
| NEWS 7 | MAY 21 | CA/CAplus enhanced with additional kind codes for German patents |
| NEWS 8 | MAY 22 | CA/CAplus enhanced with IPC reclassification in Japanese patents |
| NEWS 9 | JUN 27 | CA/CAplus enhanced with pre-1967 CAS Registry Numbers |
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| NEWS 11 | JUN 29 | STN Express, Version 8.2, now available |
| NEWS 12 | JUL 02 | LEMBASE coverage updated |
| NEWS 13 | JUL 02 | LMEDLINE coverage updated |
| NEWS 14 | JUL 02 | SCISEARCH enhanced with complete author names |
| NEWS 15 | JUL 02 | CHEMCATS accession numbers revised |
| NEWS 16 | JUL 02 | CA/CAplus enhanced with utility model patents from China |
| NEWS 17 | JUL 16 | CAplus enhanced with French and German abstracts |
| NEWS 18 | JUL 18 | CA/CAplus patent coverage enhanced |
| NEWS 19 | JUL 26 | USPATFULL/USPAT2 enhanced with IPC reclassification |
| NEWS 20 | JUL 30 | USGENE now available on STN |
| NEWS 21 | AUG 06 | CAS REGISTRY enhanced with new experimental property tags |
| NEWS 22 | AUG 06 | BEILSTEIN updated with new compounds |
| NEWS 23 | AUG 06 | FSTA enhanced with new thesaurus edition |
| NEWS 24 | AUG 13 | CA/CAplus enhanced with additional kind codes for granted patents |
| NEWS 25 | AUG 20 | CA/CAplus enhanced with CAS indexing in pre-1907 records |
| NEWS 26 | AUG 27 | Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB |
| NEWS 27 | AUG 27 | USPATOLD now available on STN |
| NEWS 28 | AUG 28 | CAS REGISTRY enhanced with additional experimental spectral property data |
| NEWS 29 | SEP 07 | STN AnaVist, Version 2.0, now available with Derwent World Patents Index |

NEWS EXPRESS 05 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 05 SEPTEMBER 2007.

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=> s human CB receptor?
       1842126 HUMAN
        350289 HUMANS
       2011643 HUMAN
                 (HUMAN OR HUMANS)
         13762 CB
          4531 CBS
         17937 CB
                 (CB OR CBS)
        853791 RECEPTOR?
L1           2 HUMAN CB RECEPTOR?
                 (HUMAN(W)CB(W)RECEPTOR?)

=> d ibib abs hitstr tot

L1   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:        2002:111801  CAPLUS
DOCUMENT NUMBER:         136:290509
TITLE:                   Nematicidal effects of hemp (Cannabis sativa) may not
                         be mediated by cannabinoid receptors
AUTHOR(S):               McPartland, J. M.; Glass, M.
CORPORATE SOURCE:        Faculty of Health & Environmental Sciences, UNITEC,
```

Auckland, N. Z.
SOURCE: New Zealand Journal of Crop and Horticultural Science (2001), 29(4), 301-307
CODEN: NZJSEF; ISSN: 0114-0671
PUBLISHER: SIR Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Few nematodes infest the roots of hemp (Cannabis sativa L.) plants, and hemp plant exts. have been utilized as botanical nematicides. The responsible constituent may be Δ9-tetrahydrocannabinol (Δ9-THC). In humans, Δ9-THC exerts its effects via a family of G protein-coupled receptors, known as cannabinoid (CB) receptors. CB receptors are phylogenetically ancient, and occur in many vertebrates and invertebrates. We therefore searched for evidence of CB receptors in nematodes. All nematode cDNA sequences at GenBank, including the entire genome of Caenorhabditis elegans, were screened for homologs of human CB receptors using BLAST 2.0 as a sequence alignment search engine. We also searched for homologs of fatty acid amide hydrolase (FAAH), the enzyme in vertebrates that metabolize the endogenous ligands of CB receptors. Several C. elegans gene products with low homol. to CB receptors and FAAH were identified. Close examination of these sequences revealed crippling substitutions at critical amino acid residues. These results suggest the genes for CB receptors are absent in C. elegans, and the nematicidal activities of Δ9-THC and Cannabis are not mediated through CB receptors.

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:570977 CAPLUS
DOCUMENT NUMBER: 135:254682
TITLE: Cannabinoid receptors are absent in insects
AUTHOR(S): McPartland, John; Di Marzo, Vincenzo; De Petrocellis, Luciano; Mercer, Alison; Glass, Michelle
CORPORATE SOURCE: GW Pharmaceuticals, Ltd., Salisbury, SP4 0JQ, UK
SOURCE: Journal of Comparative Neurology (2001), 436(4), 423-429
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AB The endocannabinoid system exerts an important neuromodulatory role in mammals. Knockout mice lacking cannabinoid (CB) receptors exhibit significant morbidity. The endocannabinoid system also appears to be phylogenetically ancient-it occurs in mammals, birds, amphibians, fish, sea urchins, leeches, mussels, and even the most primitive animal with a nerve network, the Hydra. The presence of CB receptors, however, has not been examined in terrestrial invertebrates (or any member of the Ecdysozoa). Surprisingly, we found no specific binding of the synthetic CB ligands [3H]CP55,940 and [3H]SR141716A in a panel of insects: Apis mellifera, Drosophila melanogaster, Gerris marginatus, Spodoptera frugiperda, and Zophobas atratus. A lack of functional CB receptors was confirmed by the inability of tetrahydrocannabinol (THC) and HU210 to activate G-proteins in insect tissues, utilizing a guanosine-5'-O-(3-[35]thio)-triphosphate (GTPγS) assay. No orthologs of human CB receptors were located in the Drosophila genome, nor did we find orthologs of fatty acid amide hydrolase. This loss of CB receptors appears to be unique in the field of comparative neurobiol. No other known mammalian neuroreceptor is understood to be missing in insects. We hypothesized that CB receptors were lost in insects because of a dearth of ligands; endogenous CB ligands are metabolites of arachidonic acid, and insects produce little or no arachidonic acid or endocannabinoid ligands, such as anandamide.

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